



THE GALACTIC CHALLENGE OF
EXPLORATION AND ENCOUNTER



ASCENDANCY™

THE OFFICIAL STRATEGY GUIDE



WILLAM R. TROTTER
GARY MEREDITH
SELBY BATEMAN

THE LOGIC FACTORY

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ASCENDANCYTM

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ASCENDANCY™

The Official Strategy Guide

William R. Trotter
Gary Meredith
Selby Bateman

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FOREWORD

We started the Logic Factory to have the freedom to write computer games the way we thought they should be written. I've met some amazing, imaginative people working in the field, and I thought they could do some wonderful things if they were working on their own ideas.

Nobody can veto our creative decisions or game ideas—we own and run the Logic Factory, and we decide what games we'll do and how we'll do them. We don't do games because of market analyses or to cash in on the latest recipe for a hit. When we created *Ascendancy*, we made the game we most wanted to play next. We wanted to have fun writing it and to have fun playing it when we finished.

When we started work on *Ascendancy*, game design was our first priority. We wanted the interface to be easy to understand and use. We wanted everything about the game to work like a Swiss watch. We wanted to give a sense of exploration and discovery that you would not normally find in a strategy game. We wanted you to keep experiencing new things for a long time, across many games. We wanted to provide enough variety so that we, ourselves, would enjoy playing *Ascendancy*, even after having worked on it for a year.

After we had nailed down the design, we concentrated on the programming, artwork, music, and writing. We wanted all these elements to have a fresh, unusual feel to them. We deliberately set out to avoid computer game clichés.

With work on our second game underway, we continue to ask ourselves what we most want to see and what we have the most fun working on. By challenging assumptions about computer games, we hope to create something truly unique. Look for more information in about nine to twelve months.

Jason Templeman
The Logic Factory
Austin, Texas

ACKNOWLEDGMENTS

We wish to thank a number of people for their support and assistance in the creation of this official strategy guide.

First, a special word of thanks to all the folks at Prima Publishing—especially to Roger Stewart and Hartley Lesser for giving us the opportunity to write this book and also to Michael Koch, our project editor, for his absolutely tireless efforts and excellent guidance.

We are also very appreciative of the help of Jason Templeman, Thomas Blom, and Todd Templeman of the Logic Factory. They gave us valuable insights into the universe they have created and were a delight to work with, as were Jay and Tamsen Templeman. We expect a bright future for these talented game creators.

Thanks also to Amy Pruette and Scotty Billings who designed and created the enclosed poster and chapter openings—on a very tight schedule.

Next, we offer a very large round of applause to Tony and Sherry Roberts of the Roberts Group for their outstanding book design and production work that went several light-years beyond the call of professional duty.



And, finally, thanks to the entire NewVision Studios' extended family for their constant support, creative ideas, and positive vibes.

William R. Trotter
Gary Meredith
Selby Bateman
Greensboro, NC
September 9, 1995

INTRODUCTION

LOST IN THE COSMOS?

Ascendancy is a milestone in the history of computer gaming—a rich, mysterious, and sprawling play environment that offers an almost limitless variety of entertainment and challenge.

Ascendancy also happens to be the first computer game published by the Logic Factory, a small group of experienced software developers who are committed to producing rich interactive games that can be enjoyed over and over again.

Much of the fun and interest in *Ascendancy* stem from the many discoveries and surprises that you find just around the next planet or at the end of a new star lane. For that reason, we've covered the basics of the game, collected a variety of strategic approaches, and recorded four sample missions—without laying bare all of the mysteries and challenges that make *Ascendancy* such a remarkable simulation. Heed the advice of those who have been there as you boldly venture into the far reaches of the *Ascendancy* galaxy.

HOW TO USE THIS BOOK

By now, you should be familiar with the outstanding on-screen tutorial and context-sensitive help features that are part of *Ascendancy*'s universe. You will have discovered you

have twenty-one different species, five star system densities, and three widely differing psychological atmospheres from which to choose. Each game can bring together up to seven randomly selected species.

The options that you select at the start of each game result in what's called a combinatorial explosion—there are thousands of different game configurations. It's safe to say that no two games are likely to have the exact same constellation of species, star systems, and planets. For this reason, we cannot provide you with a step-by-step guide that guarantees a successful ascendancy. Instead, we offer you a road map that will help you find your way through a constantly changing, wonder-filled universe and thus enhance your enjoyment of the game.

CHAPTER 1 — INTERGALACTIC NUTS AND BOLTS

Learning the basics of *Ascendancy* is not difficult. But understanding the strategies that can help a budding cosmic leader survive and thrive in a crowded, competitive galaxy doesn't happen overnight. This nuts-and-bolts chapter offers tips on approaching the *Ascendancy* universe faster and with a better idea of how to handle resources, what to concentrate on, and how the game's strategic and tactical windows should best be used.

CHAPTER 2 — THE 21 CLUB: GETTING TO KNOW THE NEIGHBORS

Here you'll find an annotated overview of each of the twenty-one different species, complete with species-specific strategies and comparative notes on their characteristics, diplomatic skills, and special abilities. This will help you a great deal when you're trying to decide whether to fight the Fludentri (who happen to be instant healers) or make peace with the Minions (who happen to be superb planet invaders). The poster that comes with this book is a colorful, short-hand version of this material for easy reference during game play.

CHAPTER 3 — AN ODYSSEY AMONG THE OCULONS

The Oculons are able to see all star lanes from the start of a game and thus make a good species to control while learning some star lane basics. We begin by studying the efforts of these star-gazing eyeballs in a sparse-density, neutral-atmosphere galaxy inhabited by six other species. This will allow you to get your feet wet and explore some star lanes without an arrogant Dubtak stomping you out of existence within the first few turns (although we can't guarantee it!).

CHAPTER 4 — THE CURIOUS ANTI-ASCENDANCY OF THE BALIFLIDS

Next, you'll enter a galaxy with a very dense star system, a peaceful atmosphere, and seven species, hosted by the cute and quirky Baliflids. This will give you an idea of how to advance within the saga of the Great Ascendancy without ever leaving your home world. The Baliflids are a peaceful species, and they make excellent hosts for a scenario which shows how to build a planet and handle diplomacy among multiple species.

CHAPTER 5 — DEATH FROM ABOVE: IRONSNOUT OF THE CHAMACHIES

Our third mission features the resourceful Chamachies. Recounting the events in a dense and hostile galaxy populated by four species, this rousing tale of military muscle features the famed commander Brightscale Ironsnout. The tips on how to handle an extended military campaign are worth their weight in Chamachies. You'd better acquire additional orbital shields to live through this mission, pilgrim!

CHAPTER 6 — TALES OF THE BRAVE NIMBULOID ASCENDANCY

The fourth mission is a grand space opera, featuring those lovable gasbags, the Nimbuloids. Located in an average-density, neutral-atmosphere galaxy inhabited by four species, this

scenario imparts a strategic glimpse into the complex universe of *Ascendancy*, from space alliances and exploration to technological research and warfare.

CHAPTER 7 — MEET THE COSMIC CREATORS

How did *Ascendancy* come about and who are the creators who built this fantastic universe? You'll find the answers (and more) in this interview with Jason Templeman and Thomas Blom, co-creators of *Ascendancy*.

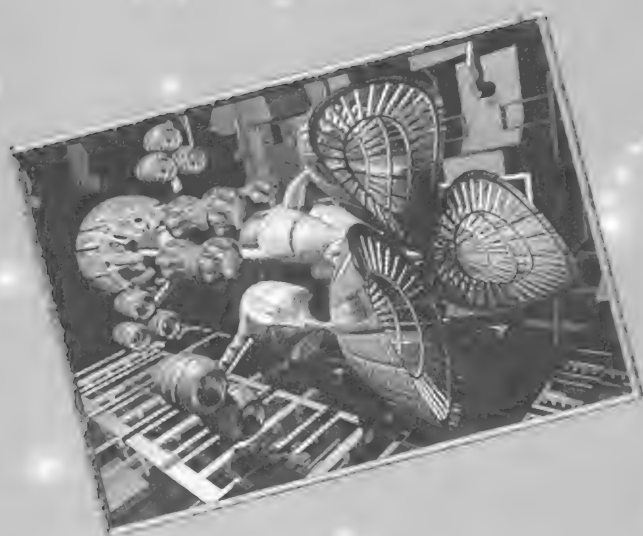
APPENDIX

Ascendancy is a game of exploration and surprise. But if you're tired of struggling with the many items that cross your path as you explore your galaxy, turn to Appendixes A and B where we've included a brief overview of both planetary items and gizmos that you might come across. However, in order not to give away too much of a good thing, we've deliberately left a few items for you to discover on your own.

Now, let's get started with an overview of some of the intergalactic nuts and bolts that will help you navigate *Ascendancy* like a pro.

“You’re going to love *Ascendancy*
... as long as you don’t mind
going without sleep!”

— Peter Smith, *Strategy Plus*





CHAPTER 1

INTERGALACTIC NUTS AND BOLTS

This galaxy consists
of three hundred billion stars.

Sixty thousand centuries ago,
there were more than twenty billion
life-sustaining planets
orbiting those stars.

Some of the life on these worlds
evolved intelligence.

Some species learned
to travel through space.

As they explored,
they encountered one another.

Wildly different cultures
competed for the same worlds.

In the enormous upheaval
that followed,
one of the species
would gain

Ascendancy.

Those who traverse the star lanes of *Ascendancy* should know that there are but three types of species in the galaxy—those who know their way around, those who think they do, and those who do not know.

In the *Ascendancy* universe, the latter two may have a good time; but they ultimately are reduced to vapor trails and cosmic dust. The same goes for those who would jump into battles and do nothing but fight. *Ascendancy* is much more of an exploratory realm than a combat arena. And while there is warfare, there is also a necessity to explore diplomacy, alliances, trade, and colonization.

Ascendancy explorers certainly will travel far, and they may colonize widely; and they certainly will see and learn much—even without superior guidance. But those who heed the advice presented here ultimately will see more worlds, colonize mightily, and become legends in the saga of the Great *Ascendancy*.

As you turn to these pages, you will learn some of the strange ways of the *Ascendancy* universe, much to the benefit of your descendants who will prosper and live longer.

GETTING STARTED

1. THE INTERACTIVE TUTORIAL AND CLICK-HELP

There are seven steps available to every would-be ascendant species. Universally known as the interactive tutorial, these steps offer a visual orientation to the various facets of *Ascendancy's* operation; it is a path *every* starfarer should take, regardless of rank and/or experience.

But, as with all things in the cosmos, some sections are more important than others. Careful attention to the following topics will provide the observant species leader with a clarity of understanding surpassing that of his or her competitors.

The Ship Operations Section

Embedded within the system display section of the tutorial is a thorough overview of ship operations. This information forms the groundwork for how to operate a ship and its components. The more a fleet commander knows about these operations, the faster he can assess the strengths and weaknesses of his ships.

Although *Ascendancy's* tutorial covers the building of ships and the exploration of space, it is in the section on "The System Display" that the observant ascendant will learn to differentiate among the individual components of ship operations—a tactical advantage.

When operating one or more ships, the system display offers the best overview of each component of the ship operation. By selecting a ship in the display window or clicking on its icon in the list of items on the right, a picture of the ship will appear at the top right of the screen.

Directly below the picture of the ship are four smaller windows representing (from left to right) the ship's weapons, shields, special components, and passive items. Newcomers to the world of *Ascendancy* frequently have trouble remembering which icons refer to the various strengths of each



Figure 1-01.

Learning to understand the ship components display in the system display window is a key to early success.

subcomponent. A competent commander, however, keeps the following in mind when looking at these windows:

Weapons

- ✓ The box on the far left represents the available weapons on the ship. Click on it and a list of weapons appears in a vertical box below it.
- ✓ A horizontal row of orange icons in the ship display window shows weapon strength.
- ✓ To choose a weapon, click on it in the display list on the right and then click on the target. A white line indicates whether the target is in range.

Shields

- ✓ Click on the second box from the left to display a list of available shields on the ship.
- ✓ A horizontal row of blue sphere icons in the ship display window shows shield strength. A vertical column of the same icon shows current ship hull integrity.
- ✓ Shields are not activated until clicked on. A box around the shields indicates their presence.

Specials

- ✓ This group of nonconventional ship items is represented by the icon box that is third from the left. Click on it to display a list of specials loaded onto the ship.

Passives

- ✓ This group of items—including engines, generators, and scanners—works without active direction.
- ✓ The horizontal row of green icons in the ship display window represents engine strength.
- ✓ The fifth horizontal and vertical rows (orange) display generator strength.



Figure 1-02.

The weapons window can be used to identify and define each ship's arsenal.

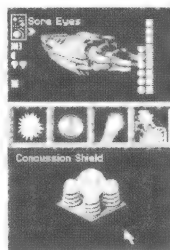


Figure 1-03.

The shields window shows the status of the shields.

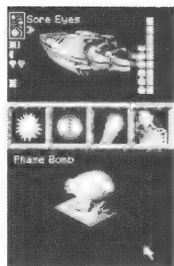


Figure 1-04.
The specials
window identifies
a unique group
of gizmos.

The ability to move fluently among these important indicators is the difference between a neophyte and an experienced commander. And keeping them straight is at first a challenge, even for the best aspiring leader. Taking stock of both the daily and overall strengths must become second nature. *To ignore or misunderstand these displays is one of the surest paths to early oblivion.* Among the many important areas of knowledge, ship operations should be practiced first in the tutorial until thoroughly learned.

Backing In and Out of a Current Game

Another advantage of the interactive tutorial is that you can return to any part of it without having to quit the game or even save it. By moving the cursor to any of the four corners of the screen interface or simply pressing **[Esc]**, a would-be ascendant can exit a current game and select any portion of the tutorial for review. This is a cosmic blessing and should become a regular occurrence for the newcomer.

To leave the tutorial at any point, press **[Esc]** twice. This action brings up a window that asks if you wish to leave the tutorial. Left-click on “yes” and when the Main Menu appears, select “Return to the Current Game.”

Left-Clicking

Ascendancy offers much information for various items and screens. For example, when viewing the planetary screen, left-clicking on any area of the planet will call up a window defining and describing that planetary square. Clicking on the research, industry, and prosperity windows in the same screen will produce a window that describes the current state of each area, including whether that planet is self-managed.

Shift-Clicking for Help

Additional information on virtually any item or screen area can be obtained by moving the cursor over the item in question, holding down **[Shift]**, and left-clicking. In everyday

parlance, this is called “context-sensitive help,” a powerful ally in learning the myriad ways of *Ascendancy*.

2. TRYING DIFFERENT SPECIES

Discovering all about the different species in the *Ascendancy* firmament can take a lifetime. Each of the twenty-one species has a different special ability and a different personality. Both variables, when combined with the wide range of possible fellow travelers in any *Ascendancy* scenario, result in varying approaches to game play. There are certain species, however, whose special abilities give newcomers a head start on understanding the workings of the *Ascendancy* universe.

- ✓ **The Oculons** — The Oculons have the ability to see all star lanes at the beginning of a game. Learning how star lanes are configured and how they work are two important strategic elements. Selecting this species will give the future leader an edge over his or her competitors.
- ✓ **The Chamachies** — The Chamachies are able to use their special ability to cut down considerably the amount of time spent on research. To go through life in *Ascendancy* as a Chamachie is to discover technology at a rate far more rapidly than any competitors.
- ✓ **The Minions** — If invading planets is either a pleasure or prime concern of yours, consider the Minions. Blessed with a special ability to win all invasions, the Minions may be your species of choice.
- ✓ **The Baliflids** — Having a deep diplomatic understanding and a most persuasive personality, the Baliflids seldom attract a swarm of invading enemies. For those who want to study the intricacies of diplomacy and to explore the far reaches of the galaxy, the Baliflids are a most engaging species.

3. START SIMPLE

Seven species, a hostile atmosphere, and a very dense star system—what does a wise but inexperienced commander do

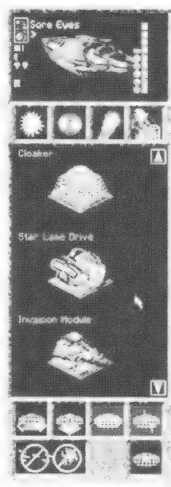


Figure 1-05. Passives are composed of items that run by themselves, such as engines and generators.

first? Take a clue from the way that life itself emerges: simplicity is the key!

- ✓ **Vacuous or Sparse Density** — A small cluster of stars is a galaxy that can be studied without the complex, intersecting 3-D environment of a dense or very dense galaxy. Is it wise to practice piloting a starship along a crowded star lane or to enjoy a few back roads while cruising quietly? Once you've mastered the basics, you may try your hand at a very dense galaxy.
- ✓ **Peaceful or Neutral Atmosphere** — For many of the same reasons explained above, selecting a peaceful or neutral atmosphere for early exploration is a wise choice for beginning species' leaders. Diplomacy is a key to the universe, and practicing it in a peaceful environment is far more rewarding and enlightening than the always prickly hostile environment.
- ✓ **Three or Four Species** — When a species has six other potential enemies or allies in the neighborhood, there is almost no time to ponder the larger questions of colonization and building resources. It seems that some species or other is almost always dropping by, and some of them may be carrying a grudge. Choose initially only three or four species to give your budding leadership abilities some breathing room.

THE THREE MAIN VIEWS

1. GALACTIC DISPLAY STRATEGY

As the home base for all other screens, the galactic display is a pivotal point in the efforts of any species leader. It allows access to all operational screens, such as the planets screen, ships screen, research screen, special ability screen, and the species screen. There are also two rows of viewing buttons along the bottom right.

The Most Helpful Buttons

In addition to the time advance buttons (see below), the most important and helpful buttons on the galactic screen are (1) the planets, ships, and research buttons and (2) the viewing buttons—especially the empire view button.

When the action is fast and furious, using the former buttons in quick succession is the best way to stay on top of things. For example, the ships button links to the ships screen which, at a glance, can tell a species leader every element relating to each ship's current state.

The planet button offers equally quick access to the list of planets colonized by a species. And as that list expands, using that view is the fastest way to learn more about each planet's status. For the same reason, using the research button is a must if you want to monitor quickly changing projects.

Viewing the 3-D Galactic Screen

The 3-D galactic display is a treasure trove of constantly changing information. Not only does it show discovered star lanes, there is also information on ships (displayed as colored triangles) traveling through systems. And it is the interrelationship between star lanes and other species' systems and ships that determine the strategic approach each commander must take to expand and colonize.

By using the filter buttons along the bottom right of the galactic display, a leader can keep track of which star lanes that species controls. Called the empire toggle, the second button from the left (in the second row of buttons at bottom right) is a commander's best bet for keeping track of which systems his or her species has undisputed rights to.

2. SYSTEM DISPLAY STRATEGY

If the galactic display can be considered the primary strategic window within *Ascendancy*, the system display is the primary tactical window. It is here that ships are ordered to move or



Figure 1-06.

The buttons for planets, ships, and research take you to those screens, while the horizontal row of toggle switches offers specific information.

fight; planets targeted for orbit, attack, or colonization; and star lanes approached for transit.

The Most Helpful Buttons

As noted earlier, the system display is the key to ship movement options. And by clicking on the ship icons below the ship movement buttons or in the 3-D system display, a species can view each ship and its components.

This view also allows for weapons and shields to be used or activated. A failure to become immediately familiar with this process is a handicap in any movement or combat situation.

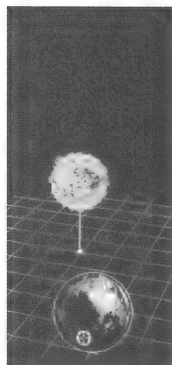


Figure 1-07.

A planet with a circle around it indicates the presence of either ships or orbital structures.

Using and Viewing the 3-D System

When moving from system display to system display, a wise leader looks out for two pieces of information. First, look for colored circles around planets. They indicate that a planet is protected by either ships or orbital defenses. It is not possible to place a ship in orbit around a foreign planet that has orbital defenses or to invade that planet until those defenses are gone.

Second, do not overlook the pass button just to the left of the repeat move button. There are times when a commander wishes to leave a ship exactly where it is even though it may be that species' turn to move. Especially when stationing ships near star lanes or planets, the pass button can be a quiet ally.

3. Planetary Display Strategy

Ascendancy's planetary displays are both strategic and tactical. Decisions about which planetary projects to start affect not only the industry, research, and prosperity of a planet but also the number and types of ships and orbital defenses to be built.

By clicking on the research, industry, and prosperity buttons along the top of the planetary display, a species leader can learn the relative planetary output of each of those

areas. And learning to select projects that balance among the three is a key to long-term strategic growth.

Using the Project Window

As a species' scientists discover new technologies or as trading information with other species adds to knowledge, one easily forgets that those advances are reflected in choices listed in the project window. To view those choices, scroll regularly through this window.

If a relatively minor project is under way and a new, more valuable project becomes an option, don't simply stay with what's already selected. Left-click on the project window, and select the newer, better project. For example, if a species is building an agriplot on a planet and the technology to create a more productive artificial hydroponifer becomes available, quit the former and choose the latter.

THREE IMPORTANT BUTTONS

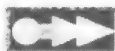
1. THE TIME ADVANCE BUTTONS

No buttons will be used more frequently than the time advance buttons. They create the chronological movement that is at the heart of *Ascendancy*. Learning when to use the day-at-a-time button and when to use the next-notable-event button is strategically important.

One Day at a Time

When the star lanes are busy, when there are visitors to your system, or when combat is joined, the day-at-a-time button is a must. By not paying attention to short-term events, careless use of the other time advance button can mean that a species' ships and planets can suddenly start disappearing without appropriate hands-on actions.





Next Notable Event

Especially in the early to mid stages of *Ascendancy*, time must advance rapidly to allow a buildup of technology, industry, and prosperity. Regular patterns of development require constant use of the next-notable-event time advance button in order to move things along.

Interrupting Time Advance

There are occasions when it may be wise to stop a rapidly advancing time sequence, even when no notable events have been reached. By clicking on one of the action buttons along the right side of the galactic display, the time advance will stop. Beginning commanders sometimes erroneously assume that, once started, a time advance must continue until a notable event stops it.

2. MOUSE MOVEMENT AND

There are many ways to move among the various screens that make up *Ascendancy*. But there are two primary ways to move quickly backward through previously selected screens.

Exit Corners



By moving the on-screen cursor to any of the four corners of the screen, an EXIT box appears. Left-click on this box to return to the previous screen. For those who are more comfortable using a mouse, this presents an easy way to move through multiple layers of screens.

Moving among Screens

For those, however, who do not mind using some keystrokes to speed up movement, the use of  is even faster. Rather than having to find the exact corner and then clicking on the EXIT box, simply hit  to move repeatedly through screens.

After working in the *Ascendancy* windowing system for even a short while, the **[Esc]** and mouse-pointer combination can noticeably improve your game-play speed.

3. THE SPECIES AND INTELLIGENCE BUTTONS

Two buttons that new *Ascendancy* explorers may not use enough, but that are crucial to diplomacy and to strategic growth, are the species button in the galactic display and the intelligence button in the species display.

Conversing with Species

At any point in an *Ascendancy* scenario, you can communicate with another species. Simply click on the species button from the galactic display to bring up a view of those species introduced so far. To alert a species that you wish to communicate with them, click on that species' circular icon.

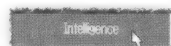
It is easy for fledgling leaders to forget this communication option as they grapple with research decisions, ship construction, planetary projects, and system exploration. But communicating regularly with the species display is a basic part of good diplomacy.



Intelligence Information

A corollary to the procedure above is the regular use of the intelligence button to advance from the species display to the intelligence display where the changing fortunes of individual species are recorded. There is much strategic information to be gained from this exercise.

For example, the number of colonies and ships, the state of diplomatic affairs, and related information are all constantly being updated. If a species is falling significantly behind in the creation of ships or colonies, that comparative information can signal early on that something must be done to correct the situation. Similarly, if two leading species are at war with one another, that fact can affect the diplomacy and the general strategies of other species in the galaxy.



The smart commander will make a practice of regularly studying developments in the intelligence display.

THREE BASIC ACTIVITIES

From colonial management to deciding what engine to put in a small ship, the opportunities for both macro- and micro-management are numerous. And yet, all the decisions to be contemplated fall within the realm of one of three basic activities—research, industry, or prosperity.

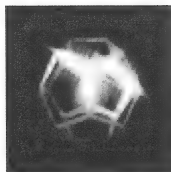
These three components are the foundation of *Ascendancy*, and their balance is a key to success. Let one activity grow too strong at the expense of the others, and the balance will be lost. *Ascendancy*'s three “legs” of research, industry, and prosperity also should be thought of as supportive of each other. There can be no great industry without the happy workers prosperity brings, just as you can't build laboratories to explore the mysteries of the universe without a solid industrial infrastructure.

1. RESEARCH

No civilization grows without the progress that comes with research. To get a really quick start out of the gate in *Ascendancy*, focus immediately on the business of research.

While some would counsel that the initial building project should always be a factory to jump-start industry, there is much to be said for putting a research laboratory at the top of the list. No research can begin until a lab exists. Success or failure in *Ascendancy* can often hinge upon a difference of only a few days in acquiring certain technologies.

For example, from conversations with several species you realize that war may be imminent. A warship is just being completed in dry dock, but you discover from intelligence reports that its armaments will almost certainly be inadequate. A plasmatron could give the edge needed to compete,



but the research will not be finished for at least twenty days—too late from your point of view. It is possible but unlikely to get the remaining research in trade from one of the other species. Had plasma research been started earlier, the plasmatron would be on line.

What's more, the effect of waiting too long before going into research is cumulative—much more so than anything you'll ever deal with in the areas of either prosperity or industry. A couple of days' procrastination at the beginning of a scenario could mean being a hundred days behind at Day 6000. And it is not only in weapons research that delays will accumulate. Slow progress in getting to research in advanced chemistry could seriously hinder your population's growth by not allowing construction of an artificial hydroponifer for increased prosperity. Similarly, lagging behind in environmental encapsulation research means that habitat structures will not be ready early on.

Of course, there's more to research than just deciding to do it. Create a clear, long-term strategic plan before advancing too far. If you desire to enter the spaceways as soon as possible, focus your research on orbital structures, which is fundamental to getting a ship into interstellar space. But should research follow that path to the exclusion of all else or should a parallel line of research be established?

In most cases, it is not to your advantage to concentrate exclusively on the research of orbital structures. Getting your xenobiological research up and running is recommended since the by-products of this line of investigation bear directly on colonization.

However, if your ambition is solely conquest, you can forego xenobiology for some time and plunge full speed into ship and weaponry research. Trust that the overwhelming might of your arsenal will provide the research data of other species.

Another research tactic, if playing a peaceful scenario, is to concentrate on making friends with everyone—you'll eventually get most of the research handed to you in trade.

The only drawback to this is that you must have some research data to trade, so never ignore scientific research completely.

Also, as with industry and prosperity, upgrade research facilities as new and more efficient labs come on line. A research campus is considerably more productive than a simple laboratory, especially if it can be combined with the luxury of a scientist takeover.

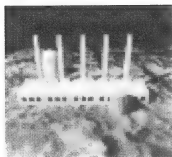
2. INDUSTRY

All the research in the universe is going to be of little help if you don't have the industrial might to put it into practical use. Once discovered, the technology for orbital structures and ships doesn't come into being unless there is the industrial power to make them.

If the first planetary project is a laboratory, make sure that the next structure is a factory. Factories typically are built on red squares. Early in the game, however, you also may want to cover as many white squares with them as possible, since industrial output spurs scientific research to the point where it is more productive to build extra factories than extra labs.

The effects of industrial production are often hard to pinpoint, immersed as they are in the general infrastructure of a planet. Yet, if you doubt the power of industry, try to play a scenario without a factory, or at least with a very small industrial presence. You'll soon be reading your own species' obituary as others pass you by.

Research, however, is not the only way to go if you want to enhance industrial growth. If possible, replace all factories with industrial megafacilities early on to take advantage of the exponentially increased output. In conjunction with these new facilities, take a few days to build a couple of engineering retreats. This will not only benefit industry but research as well. A Metroplex can add significantly to a colony's output; and to give your workers a real kick-start,



construct a hyperpower plant. Only one is needed, and its effect on production is phenomenal.

3. PROSPERITY

Prosperity is the vaguest of the three basic *Ascendancy* factors, but that doesn't mean it's any less important. Prosperity makes a worker happy. Only a happy worker is a productive worker. Developing prosperity involves building structures that will keep a worker happy. The agriplot, for example, is a highly productive farming area that cranks out enough food at a fairly prodigious pace to keep a worker happy for days and days to come.



As a colony grows, grab the first opportunity to set up an artificial hydroponifer, which is far superior to an agriplot in its output. Still, with continuous population growth, even this farming dynamo eventually will need help. A fertilization plant is a must, as is a lush growth bomb to make the most of the available land.

Prosperity, however, doesn't just fill empty stomachs. Members of a species need to feel that they are feeling, thinking beings and not machines (except for the Minions, who couldn't care less). Provide the population with more than just the basic necessities of life. Build a Logic Factory, a complex for research into what makes a species happy, or a habitat, a pleasant and affirming place in which to live and interact, and your population shoots up overnight. Also, try instituting an endless party for a few turns, especially effective if your population is looking a bit thin.

THREE PRIMARY GOALS

1. ORBITAL STRUCTURES AND SHIPBUILDING

It is no accident that *Ascendancy's* designers placed the research icon for orbital structures in the upper left-hand

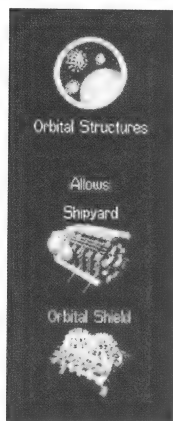


Figure 1-08.
The research
of orbital
structures is
almost always
the first choice.

corner of the research screen. It is the most productive way to start research since, with few exceptions, a primary goal is getting out into space. In fact, if you play as a Chamachie, getting into space is an absolute must since the days of the Chamachie star system are numbered.

Once initial discoveries in orbital structures have been made, you will be faced with a building option. Is it better to protect a colony by taking on an orbital shield first, or is putting a shipyard into orbit a stronger priority? If you lean toward the first option, keep in mind that for the first few hundred days no one is going to come calling on you, unless you're playing against the Hanshaks (who know everyone at the start). If another species stops by for the first time, they are not likely to come in with guns blazing, even in a hostile atmosphere. By the time you should start worrying about invaders, you will have had plenty of opportunities to construct shields and defenses in orbit.

A shipyard orbiting a home world, by contrast, does not mean a species automatically can start with the construction of spacecraft. Building ships requires further research. Because of that, a case can be made for setting up a shield first. By the time shipbuilding research catches up, there will have been plenty of opportunities to construct a shipyard.

Once a shipyard is completed, let overall strategy influence the type of vessel that you build. In the early stages of the game, it is generally more important to get out into the galaxy and start exploring and colonizing than it is to construct a fire-breathing planet buster. Concentrate on getting colonizers on the first ships you build. This means that a species can spread rapidly before too many other species gain control of key star systems and planets.

2. XENO BIOLOGY AND COLONIZING

Xenobiological research starts a species on the road to a wide range of discoveries relating to colonizing, building structures, and changing alien environments to suit a species' needs.

The most obvious and important by-product of this research is the colonizer module, a self-contained, single use, prefabricated colonial base. It carries all the equipment needed to establish a presence on a world, along with a complement of particularly hardy colonists trained to survive harsh conditions.

Dropped by an orbiting ship, a colonizer immediately establishes a planetary outpost from which further construction can be directed. If colonization is of prime interest, load as many colonizers onto each ship as possible without sacrificing that ship's basic ability to move, use star lanes, and implement shield protection.

Beyond the colonizer module, the most important result of the xenobiological research line is the ability to terraform planets. Terraforming is the process by which uninhabitable worlds are made habitable, primarily through atmospheric manipulation and, in some cases, the introduction of free water. Terraforming is not only valuable from a colonial standpoint; it also allows the greatest extraction of productivity from land on a home world. Terraforming turns those black squares that previously were only suitable for transportation tubes into productive white squares on which any structure can be built.



3. DIPLOMACY AND WAR

Diplomacy and its dark twin, warfare, are the most difficult areas of *Ascendancy* to master. Much of the confusion comes simply from the rather vague precepts you're presented with. Each of the various species' cultural characteristics are presented for appraisal; but what actually transpires between species is more a matter of random chance, timing, and special abilities than any deep understanding of a particular species. That's not to say, however, that you have no control over interspecies relationships, only that you must go with the flow of each scenario.

In diplomatic negotiations, don't give away everything; and don't leap into an initial trade of information without

first considering the motivations and status of those with whom you are trading. Notice that even the most forthright of the species are guarded during the first meeting, and that is a good lead to follow. Don't be rude or aggressive, but don't offer to trade information or ask about an alliance either.

If a species is asking for something, they probably need that something more than you need them. The one exception to this is a scenario in which your species is playing a completely pacifistic role with little or no interest in colonization. In that case, make friends with everyone as soon as possible.

If a species feels particularly secure, it may want to stir things up a bit by breaking a few alliances. This does not have to be a call to arms; just back away for a few turns and see what happens. Almost invariably the other species will return, asking you to reconsider.

This technique also can be useful in bringing a recalcitrant species to the bargaining table. It may be, for example, that an alliance with a third species has been the primary holdup in another species' relationship with you. By quitting an alliance, the result may open the door to an agreement with a new species. A few turns later, you should be able to resume the former alliance while keeping the new one.

War, usually a last resort, can sometimes have positive consequences if handled wisely. In *Ascendancy* there really is such a thing as a "good war." You might, for example, covet a certain planet. You may control all but one of the planets in a solar system, and needing the capacity to build more ships, you decide to invade the lone holdout planet. If the planet is not too valuable you can often take it without much fuss. By the way, this works much better early in a scenario. Later on your opponents may have too much firepower available for you to play fast and loose with one of their colonies, no matter how insignificant it might be.

THREE STRATEGIES IN SHIPBUILDING

1. ONLY FOOLS RUSH IN...

The way to approach shipbuilding in *Ascendancy* is to ask exactly what is needed before spending the time to outfit a ship in ways that will be either under-powered or inappropriate.

The first thing to ask is what size ship is needed. The medium hulls are probably the best bet for most occasions. They have more lifting ability, which means they can carry more weapons, colonizers, or shields—or all of these. Of course, a smaller ship is out of the shipyard and on its way much sooner, but it may not be good for anything besides sightseeing. Early in a game time is critical, but not so critical that you can't afford to spend a little extra time building a medium-hull ship.

2. GOOD, BETTER, BEST

Ship systems are divided into four general categories—propulsion, offensive weaponry, defensive systems, and detection equipment. Within each grouping are several levels of power or effectiveness, although in some categories such as propulsion your choices are rather limited. For example, it takes quite some time before an ion banger can be upgraded to a graviton projector. But the really tough choices are in the offensive and defensive systems.

The two main factors to consider in offensive weaponry are rate of fire and power demand. It is a given that, as you progress up the technological ladder, weapons will become ever more effective against other ships. The big questions are how much these new weapons will affect your own ship, and how often will you be able to use them. The plasmatron, for instance, is a prohibitively powerful weapon, usually destroying a moderately shielded ship with only two shots, even from a great distance. That's assuming, however, that you'll



Figure 1-09.

In choosing weapons, consider the rate of fire and power demand.

have a chance to get off two shots. The plasmatron is a notoriously slow-loading weapon, so another species may be able to fire several lesser blasts against you before the plasmatron can be spooled up for another shot.

3. STAYING HEALTHY

One of the most important aspects of shipbuilding, especially in extended scenarios, is to be able to restock and repair depleted and damaged ships. Be sure to have enough orbital docks and to place them strategically throughout multiple systems.

Perhaps the best mechanism to have on board to keep spacecraft at optimal operational power is a replenisher. Although it takes a while to reach that technology, the cumulative effect of replenishers is worth the wait.

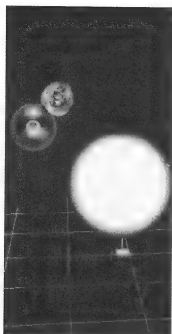


Figure 1-10.
Positioning ships
near star lanes
as sentries
results in a
distant early
warning system.

THREE FACTS OF WARFARE

1. STAR LANE STRATEGY

There are several fundamental rules having to do with combat in relation to star lanes. For example, try stationing ships next to star lanes leading to systems controlled by fierce competitors or those at war with your species. These sentinels can help monitor and protect crucial star lane nodes so that a species can have some forewarning of an enemy's arrival.

Another strategy is to equip several ships with multiple star lane drives, to be used as special "space firetrucks" that are fast enough to put out the fires of war in nearby systems. Being able to move quickly and in force through several systems can help forestall incursions by aggressive colonizers or invaders.

As an *Ascendancy* scenario progresses, make sure that each star lane sentry ship has several lane destabilizers. These won't destroy ships within the star lanes, but they do throw

them back to their point of origin. This tactic gives a species the time needed to marshal additional forces . . . or run, as the case may be.

2. COMBAT STRATEGY

Ascendancy has been created so that those who want to discover and colonize the galaxy do not have to count attack points or prepare logistical orders of battle or carry out other mathematical war game functions. Beyond that, however, there are a few combat strategies to keep in mind.

Generally, attack only if the odds appear to be in your favor. This is why ship construction takes on such importance early in the game. There is no simpler rule for combat in the *Ascendancy* system than to be aware of the relative strengths of other species' ships as soon as hostilities develop.

Another tactical element of ship combat is to maximize all of your resources. For instance, in a system controlled by your species, position ships near planets so that the orbiting weapons systems can be allied with a ship's weapons system. Don't permit the enemy to divide and conquer you.

Make sure that space docks are readily available and that their positions are known. Quickly refitting damaged ships is fundamental to extended combat. There is no time to hunt for another system with repair facilities.

3. DEFENSIVE VERSUS OFFENSIVE

There are two general rules of thumb to bear in mind when thinking of whether to build offensive or defensive weapons.

Basic defensive systems don't seem to be as effective as their offensive counterparts. As technology progresses, however, the edge actually goes to the defensive side which has some rather subtle weapons such as the intellect scrambler (which is more effective than you might imagine). This is especially true when you have a multiple-ship engagement in progress.



Cloaking technology is also good, although more sophisticated ships later on in a scenario have the means to negate it.

THREE REASONS NOT TO BE #1

1. DON'T DRAW A CROWD

As a rule of thumb, keep a moderately low profile, at least until the defenses and interstellar capabilities of your species are well advanced. Exploratory ships do not seem to provoke too much hostility (except in a hostile atmosphere), but heavily armed and armored ships that venture into alien star systems are likely to be challenged—much like Old West gunfighters.

Also, the more planetary systems a species controls, the more likely they are to draw the attention of others. Once a species controls too many planets, others will come calling—usually with the intent to stop what they perceive as rampant imperialism. To avoid being called on, check your intelligence charts regularly and keep your species second in the ranking of total systems controlled; being in third place is even better, since it gives you more options for alliances.

In a peaceful atmosphere, a large number of defensive orbital structures, especially missile launchers, deters most species. The reverse is true in a hostile and sometimes even in a neutral atmosphere. Under these circumstances, try limiting your species to having no more than three missile batteries in orbit unless you are already expecting an attack.

Finally, don't place colonies in systems controlled by other species. Even in a peaceful atmosphere, this measure would be interpreted as a provocative act. In a hostile atmosphere, it is akin to waving a red flag at a bull.

2. BIDE YOUR TIME

In *Ascendancy*, there is a fine balance between advancing too quickly and too recklessly and advancing too slowly and too timidly. While developing a species' planetary resources and spaceflight capabilities, don't initiate alliances; have other species come to you. This will help your species gain the upper hand in negotiations.

3. GIVE PEACE A CHANCE

It is difficult for a species to slash and burn its way across the galaxy without incurring the wrath of others. Unless your aim is total and swift galactic domination, try to make peace with all your neighbors. Keep in mind that some species have a good memory; anything untoward you might do to them on Day 600 may come back to haunt you on Day 12,407. Apart from territorial acquisition, there's little to be gained from war.

THREE THOUGHTS ON WINNING

1. WHAT IS WINNING?

In keeping with the open-ended nature of the game and the goal of letting players explore and discover, the creators of *Ascendancy* have deliberately left the winning conditions undefined.

2. MULTIPLE WAYS TO WIN

There are at least four ways to win in *Ascendancy*, none of which is spelled out in the game or in the manual. To excel in the game, pay close attention to the general conditions of capturing territory, controlling planets, and forming

alliances—all of which are covered one way or another in this guide.

In brief, the winning conditions include the following:

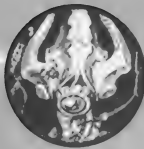
- ✓ **Capture all home systems** — By conquering the home star systems of all other species in a scenario, you control all governments and thus all species.
- ✓ **Control over two-thirds of the galaxy** — With this amount of control, no other species will be able to challenge your dominance.
- ✓ **Destroy all other species** — Obviously, this results in an automatic winning condition.
- ✓ **Enter into alliance with the entire galaxy** — By achieving a galaxy-wide alliance, all species can continue to grow and prosper in peace.

There is only one losing condition: your species becomes extinct. Unfortunately, you will have no difficulty achieving this status numerous times!

3. WHAT ARE YOUR GOALS?

Whether a species wins or loses has a great deal to do with the goals you set and the strategies you employ to meet them. Only through continually experiencing the *Ascendancy* universe over a series of adventures can you hope to understand the winning conditions and then start to achieve them.

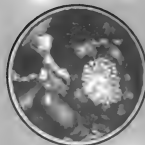
Enough said. Now pick up your Tonklin Diary and go meet the neighbors!



The Minlons



The Snoverdomas



The Orfa



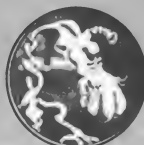
The Kambuchka



The Hanshaks



The Baliflids



The Swaparamans



The Frutmaka



The Shevar



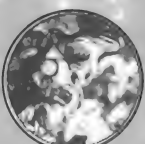
The Govorom



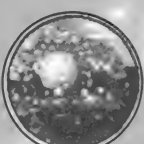
The Ungooma



The Dubtaks



The Capelons



The Mebes



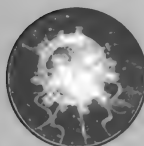
The Oculons



The Arbryls



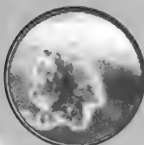
The Marmosians



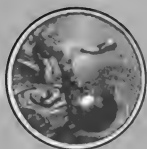
The Chronomyst



The Chamachles



The Nimbulooids



The Fludentri

CHAPTER 2

THE 21 CLUB:

GETTING TO KNOW THE NEIGHBORS

Tremble, Oculons! The
Shevar are upon you!

The currents have
brought us together.
Minions, we Nimbuloids
greet you.

No, Orfa. We Hanshaks
are peaceful, but an
alliance is asking too
much.

We Chamachies are
jealous guardians of
our knowledge. We
decline your offer.

Their names are as alien as their images, and their personalities are as different as their special abilities.

Twenty-one different species with twenty-one very different approaches to the universe of *Ascendancy*. They are the very heart and soul of this great universe. And though it is impossible to predict which set of species will be thrown together in any given scenario, it is certain that a knowledge certain that a knowledge of each of them is the only sure way to stand a fighting chance.

At any moment, a passing unidentified spaceship may come calling at your species' planet. Will it be the meditative Hanshaks, the gaseous Nimbuloids, the militant Shevar, or the far-seeing Oculons? Will your species greet them warmly and ask to trade information about star lanes and research? Will you be able to form alliances and strive to understand the other species? Will you seek to dominate and control these species? Or will you slash and burn your way across the galaxy, laying waste to the home worlds of your fellow space travelers?

The choice is yours. But whatever you choose to do, you'd better familiarize yourself with the abilities, diplomatic skills, and strategic considerations that relate to each and every one of your twenty-one neighbors. In *Ascendancy*, you learn as much from your enemies as you do from your friends.

Introducing your friends and your enemies . . .

Arbryls Special Ability



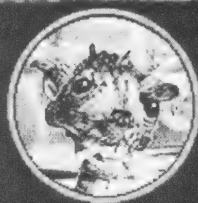
The Arbryls can disrupt the flow of space. You can block all star lanes entering your colonized systems.

It will take 92 days to amass the energy needed to use your ability.

ARBRYLS

- Description:** Slow, but highly intelligent, gangly tree-people from a planet with only plant life.
- Special Ability:** Can block the star lanes leading to their systems through the use of accumulated special ability points (SAPs).
- Diplomacy:** Peaceful isolationists; neutral in conflicts between others; listeners rather than talkers; incredibly focused and concentrated.
- Characteristics:** Passive, reclusive; will ponder the path to space for years.
- Species Strategy:** The Arbryls are not an aggressive species, and their special ability is more defensive than offensive in nature. They are particularly effective in maintaining good relations with other species while quietly blocking those species from using the star lanes into the Arbryls' star systems.
- When guiding the Arbryls, be aware that under the right configuration of systems and species, the defensive nature of their special ability can allow a strong buildup of their home systems and other nearby systems. But don't wait too long since other systems will expand around you aggressively.
- When dealing with the Arbryls, negotiations are possible; but they are naturally prone to neutrality rather than alliances. They are not likely to invade or crowd your systems.

Baliflids Special Ability



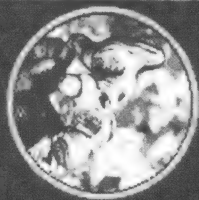
The Baliflids are disarming diplomats. You can force all aliens to make peace with you.

It will take 100 days to amass the energy needed to use your ability.

BALIFLIDS

- Description:** Cute, friendly, and highly intelligent rodent-like creatures with strong charisma and finely honed perceptive abilities.
- Special Ability:** Can force those at war with them to request peace by using a buildup of SAPs.
- Diplomacy:** Have a keen awareness of the outlook and motivation of other creatures; everyone likes making peace with them.
- Characteristics:** Beguiling; able to smooth over disagreements; quirky; fun-loving; take nothing seriously.
- Species Strategy:** One of the most fascinating species, the Baliflids have a powerful ability to quietly disarm opponents and to make alliances with others. This capability means that the Baliflids may create a prolonged period of peace among multiple species while they build their own infrastructure.
- When leading the Baliflids, maintain consistent and friendly diplomatic approaches. Those efforts will almost always be rewarded with extended peace, unless operating in a hostile atmosphere. The Baliflids also can induce other species to trade research and star lane information—a valuable trait.
- When dealing with the Baliflids, be aware that although not aggressive, they can be deceitful and disarming. They are competitive and will reach out to build colonies in new star systems.

Capelons Special Ability



The Capelons are self-preserving. You can make all your colonies invincible for one day.

It will take 66 days to amass the energy needed to use your ability.

CAPELONS

Description: Masses of flowing fibers that are able to rearrange bodies to assume any shape.

Special Ability: Can make planets invulnerable and immune to invasions for a turn through SAPs.

Diplomacy: Cunning; keep motives hidden; volatile and untrusting, even paranoid.

Characteristics: Try to avoid aggression, but quick to perceive threat; camouflage and mimicry evolved for survival; able to repel threats and camouflage planets telepathically.

Species Strategy: The Capelons are the schizophrenics of the galaxy. Insecure, withdrawn, and paranoid, they are unstable to the point of engaging in active deception. Their special ability means that they can frequently avoid having numerous visitors to their planets—especially valuable during times of great hostility and combat.

When leading the Capelons, remember their greatest strength lies in the ability to hide or to shield their planets. This is a defensive measure, but it can allow a buildup of resources and power on planets sufficient to allow colonial adventuring.

When dealing with the Capelons, be ready because their paranoia and volatility make negotiations and the establishment of alliances difficult. That volatility also can make them reckless in declaring war if they have an upper hand—or think they do.

Chamachies Special Ability



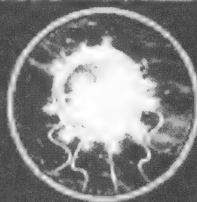
The Chamachies are brilliant scientists. You can immediately achieve any discovery you are pursuing.

It will take 89 days to amass the energy needed to use your ability.

CHAMACHIES

- Description:** Six-legged reptiles who are fascinated with technology and gadgets and who are brilliant engineers and fleet captains.
- Special Ability:** Can complete current research project immediately through the use of SAPs.
- Diplomacy:** Generally peaceful, but haughty and demanding in negotiations; fickle when it suits them.
- Characteristics:** Stress enhances their scientific abilities and amplifies their determination; their star system will someday collapse, spurring their frenetic outward migration.
- Species Strategy:** The Chamachies' ability to collapse the time it takes to complete research projects makes them one of the most attractive species to lead. This is particularly effective when a leader realizes that the special power can be used for those projects that require great amounts of time (for example, when the special ability is ready, pick a long-term rather than a short-term project.)
- Leading the Chamachies successfully means having access to advanced technology much earlier than other species. (Watch out for the Dubtaks, though!) Using that technology aggressively is a powerful offensive tool that can take the Chamachies far.
- When dealing with the Chamachies, realize that they will be far ahead in most technology. If the atmosphere is hostile, try to attack them earlier rather than later; if possible, form alliances and certainly attempt to trade technological information.

Chronomyst Special Ability



The Chronomyst can change the rate of time passage.
You can move quickly through star lanes.

CHRONOMYST

- Description:** Lightning-quick, prism-like water creatures whose brains are organic optical computers.
- Special Ability:** Don't need star lane drives to travel through star lanes; move faster through lanes than other species.
- Diplomacy:** Friendly, but unable to understand the needs and motivations of others.
- Characteristics:** Volatile, unafraid of conflict yet mean no harm; driven to follow the light of the stars as dictated by the will of their God Chronos.
- Species Strategy:** The Chronomyst have an ability to get the jump on other species in star lane travel. Without having to wait for the discovery of star lane drives, they can launch ships through the lanes earlier than others. While this distinction disappears rather quickly, they always maintain the capability of moving faster than other species.

The Chronomyst, while apparently mystified by the motivations of those around them, make excellent colonizers and adventurers. For leaders who like to build ships quickly and colonize rapidly, the Chronomyst are a perfect species.

Those who must share the star lanes with the Chronomyst always should be aware of their ability to move through the galaxy earlier and faster than others. For that reason, other species are wise to steer clear of Chronomyst areas that are well populated—there will be fewer opportunities to find new systems that haven't been visited and colonized.

Dubtaks Special Ability



The Dubtaks are unsportsmanlike scientists. You can steal any technology known by at least two other races.

It will take 63 days to amass the energy needed to use your ability.

DUBTAKS

- Description:** Lovers of technological gadgetry, which they gather covertly from others to achieve safety.
- Special Ability:** Steal discoveries of other races through espionage.
- Diplomacy:** Seemingly friendly to everyone, yet duplicitous; primarily interested in self-protection.
- Characteristics:** Not aggressive, but extremely covert; threats seem mealy-mouthed; prefer to keep other species strong in order to steal from them.
- Species Strategy:** The Dubtaks' ability to literally steal others' technology makes them a considerable risk to those who have advanced rapidly. (Watch out, Chamachies!) For that reason and because of their secretive nature, they make neither good trading partners nor allies.
- To lead the Dubtaks successfully, however, is to understand that they must get into contact with other species early and stay in contact in order to continually steal new technology. It is a risky endeavor, because their nature arouses suspicion. They are almost assured of conflicting with aggressive species.
- When dealing with the Dubtaks, be aware that alliances are suspect if and when they occur, and that the Dubtaks have a predisposition to take whatever knowledge you have without giving up anything in return.

Fludentri Special Ability



The Fludentri are resilient. You can repair all damage to your ships.

It will take 60 days to amass the energy needed to use your ability.

FLUDENTRI

Description: Dimwitted polymerized liquid beings able to instantly self-heal by regeneration (unless entire body disrupted at once).

Special Ability: Can repair and restore their ships once they've accumulated enough SAPs.

Diplomacy: Hostile; ally with those equally aggressive; perceive size of cosmic territory as indicative of status.

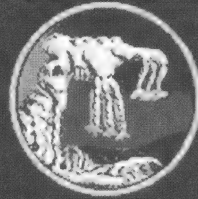
Characteristics: Ambitious; hungry to prove themselves and to dominate; skilled and creative warriors.

Species Strategy: The Fludentri are aggressive and ambitious. Couple those personality traits with an ability to restore damaged ships with special ability points, and you have the foundation for an extremely combative species.

For the leader who likes to build space fleets and take an offensive approach to the galaxy, the Fludentri offer a perfect match. By planning major battles so that SAPs are available to help restore damaged ships, a Fludentri leader can cut a wide swath through the star systems.

Those who have to deal with the Fludentri will find them difficult to negotiate with and even more difficult to trust. Their ambitions mean that they suddenly can change from neutral to hostile and back to neutral again. They seldom desire to form alliances and live in peace.

Frutmaka Special Ability



The Frutmaka are able to repel. You can warp alien ships out of your colonies' stars.

It will take 77 days to amass the energy needed to use your ability.

FRUTMAKA

- Description:** Highly intelligent, near-sessile fungal creatures who share a common home world and ancestry with the Swaparamans, whom they exiled to protect their beliefs and home life.
- Special Ability:** Can teleport alien ships in Frutmaka-controlled systems back to original home worlds through the use of SARs.
- Diplomacy:** Poor negotiators; devotion to their God Graveesha makes compromise seem unacceptable.
- Characteristics:** Xenophobic; zealously religious.
- Species Strategy:** The Frutmaka's ability to periodically clear alien ships out of star systems they control offers several advantages. First, in early home world situations, the ability gives the Frutmaka a chance to build up their first star system with less concern over aggressors. Second, as they expand, careful use of the special ability can literally carry away opponents or competitors at critical moments.
- To lead the Frutmaka successfully, an understanding of the timing of tactical use of their special ability is crucial. By personality and by special ability, they are an active and aggressive species guaranteed to see plenty of action.
- Frutmaka opponents must understand that to overcome their special ability, a succession of attacks or encounters must be scheduled so that all ships are not zapped away at one time. Negotiating with the Frutmaka or forming alliances with them is risky business and usually unsuccessful.

Govorom Special Ability



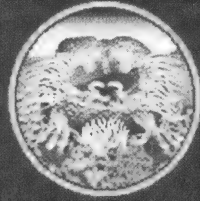
The Govorom are nature-goddesses. You can turn your least populated colony into a rich world.

It will take 150 days to amass the energy needed to use your ability.

GOVOROM

- Description:** Spirits of nature so in tune with an environment that they are able to nurture and manipulate resources into a lush world.
- Special Ability:** Can make their least populated planet a rich planet through the use of SAPs.
- Diplomacy:** Honorable but guarded; slow to make alliances; usually neutral.
- Characteristics:** Gentle and seclusive, but will correct the misguided and out-of-balance life forms that threaten others.
- Species Strategy:** When it comes to building planetary resources, the Govorom are the best. Their special ability means that colonized planets with almost no resources or population can be turned into productive planet paradises.
- For leaders who seek strong colonization efforts and want to establish well-developed colonies over far-flung regions of the galaxy, the Govorom are a natural species to direct. In addition, their personality and relatively passive approach makes them capable of having good relations with other species.
- When encountering the Govorom, do not expect them to form alliances easily. Much groundwork has to be laid and then, suddenly, they may request an alliance—sometimes directly following another species' entreaties for alliance.

Hanshaks Special Ability



The Hanshaks are telepathic communicators. You can talk to all other races from the start of the game.

HANSHAKS

Description: Doughnut-shaped mind-body beings who are known for their wisdom and intuition.

Special Ability: Know about and can talk to all races from the start; can communicate telepathically to other sentient life.

Diplomacy: Masters of communication; attempt to make peace and strive for harmonic coexistence.

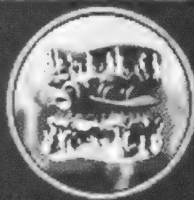
Characteristics: Nonaggressive; exist as druidic society in tune with nature; reach other planets to encounter the diversity of life.

Species Strategy: The telepathic ability of the Hanshaks means that diplomatic efforts come to the forefront early on. They can speak with any other species from the very first day, and so can begin a strategy of negotiations and alliances much earlier than other species.

As a Hanshak leader, use the Hanshak's special ability to negotiate peace and harmony with other species from the start, then request scientific research and star lane information. This can mean further trading opportunities among several species before the other species have a chance to meet.

When dealing with the Hanshaks, especially in a peaceful atmosphere, technology trades and alliances are well within reach. They can be trusted more than most other species, and they make good trading partners since they seek trades with all species from the start.

Kambuchka Special Ability



The Kambuchka can sense life forms from far away.
You can see all alien home stars.

KAMBUCHKA

Description: Large, convoluted, sensory membranes who subsist by filter-feeding the soupy atmosphere of the surrounding environment.

Special Ability: Able to see location of all home worlds from the start.

Diplomacy: Clairvoyant and thoughtful.

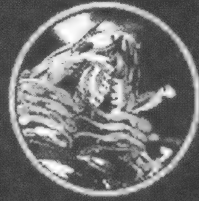
Characteristics: Peaceful and exploratory; able to detect distant living beings and to locate food and avoid predators.

Species Strategy: The Kambuchka are not aggressive by nature and can successfully pursue good diplomatic relations with other species. Their special ability enables them to see the locations of all other species' home worlds. This gives them an advantage in setting their sights on which star systems to colonize and which to avoid.

Leading the Kambuchka offers a chance to better understand the interrelationships of the star systems by watching the star lanes unfold relative to the home worlds of other species. No matter what the atmosphere, this knowledge of the location of other species is a powerful strategic indicator.

When encountering the Kambuchka, remember that while they like to explore aggressively, they also generally are peaceful and open to trading and alliances as scenarios unfold.

Marmosians Special Ability



The Marmosians can create hatred. You can cause alien species to strongly dislike any species at war with you.

It will take 100 days to amass the energy needed to use your ability.

MARMOSIANS

Description: Lazy, yet territorial insects who rely on the efforts of others and feed on heat and light.

Special Ability: Cause enemies to go to war with each other through the use of SAPs.

Diplomacy: Self-serving; see others as obstacles or potential tools; can perceive subtleties in negotiation beyond the grasp of others.

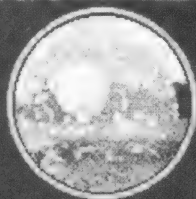
Characteristics: Expansionistic; manipulate others by mood alterations.

Species Strategy: The Marmosians are troublemakers and can cause other species to wage war on one another while the Marmosians stand by and reap the rewards. Their desire to expand and to manipulate others means that they usually will be in the thick of conflict.

When leading the Marmosians, a strong leader will bide time until occasions occur that let the Marmosians throw two other species at one another. By letting their opponents weaken themselves in combat, the Marmosians ensure that they will end up stronger than those who have been fighting. For those who want an active, aggressive leadership experience, the Marmosians offer plenty of both.

When dealing with the Marmosians, don't be surprised if suddenly one of the other species declares war on your own species. There is always plenty of combat going on near the Marmosians.

Mebes Special Ability



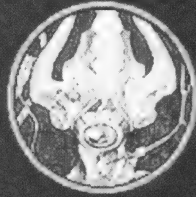
The Mebes are good at populating. You can increase the maximum population of all your colonies.

It will take 72 days to amass the energy needed to use your ability.

MEBES

- Description:** Large single-celled creatures of average intelligence who are able to reproduce at will.
- Special Ability:** Add to the maximum population on each of their colonies through the use of SAPs.
- Diplomacy:** Plaintive and humble, yet hard to communicate with.
- Characteristics:** Repulsive to most other species; explosively expansionist.
- Species Strategy:** The Mebes are a strange species with a rather subtle special ability—the capacity to increase population on all colonies, thus raising the potential for overall productivity and prosperity. Although the Mebes are known as noncommunicative whiners, a strong leader can force them into new modes of exploration, colonization, and communication. With the ability to periodically raise population on all colonies, resources can expand dramatically given enough time.
- Encountering the Mebes is likely to be a frustrating experience. They are not adept at negotiations or alliances and generally are transparent in their desire to get something for nothing. Remember that they are expansionists and thus can be combative.

Minions Special Ability

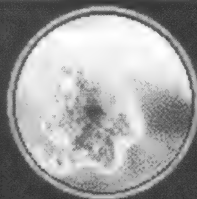


The Minions are masters of invasion. Your planetary invasions will always succeed.

MINIONS

- Description:** Robot-creatures whose strong, quick, dormant programming is controlled by an extra-galactic master species.
- Special Ability:** Never lose in world takeovers.
- Diplomacy:** Egocentric; show no concern for others' needs.
- Characteristics:** Unstoppable; efficient use of strength and speed; assimilate other life forms.
- Species Strategy:** A robotic approach to the universe and an all but unstoppable talent for invading other species' planets make the Minions one of the more impressive and disliked species in the galaxy.
- For those leaders with a penchant for conquering other planets, the Minions offer solid credentials. But beware, the universe has a balance all its own. And those who would run rampant through the galaxy may have to answer to a cosmic justice that abhors blind ambition.
- Those who find themselves neighbors of the Minions should not skimp on the planetary defenses. The Minions seldom lose an invasion, but that's no reason to roll over and play dead. They are least invincible when fighting ship to ship.

Nimbuloids Special Ability



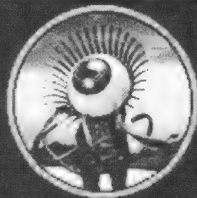
The Nimbuloids are extremely productive. You can boost the progress on all your colonies' projects

It will take 68 days to amass the energy needed to use your ability.

NIMBULOIDS

- Description:** Dense, cohesive gaseous creatures who are marvelous builders due to their ability to form tools of any shape.
- Special Ability:** Can complete all current construction projects immediately through the use of SAPs.
- Diplomacy:** Peaceful, quiet, and generally neutral; see reality in terms of an intersecting flow of karmic currents that determine destiny.
- Characteristics:** Thoughtful, peaceful; communicative within own species.
- Species Strategy:** The Nimbuloids' great talent for building instantly is one of the more powerful special abilities. The quick results mean that Nimbuloid industry and prosperity can flourish far faster than those of other species.
- To lead the Nimbuloids is to have to deal with two seemingly conflicting elements. First, the Nimbuloids generally are thoughtful and neutral; second, they are the galaxy's fastest builders. The former normally would lead to a less aggressive approach to colonizing and exploring. But the latter ensures that the Nimbuloids have the capability of being among the first species to venture forth and build new worlds.
- When encountering the Nimbuloids, other species face the same conflicting elements. The Nimbuloids can be peaceful allies as well as prolific colonizers.

Oculons Special Ability

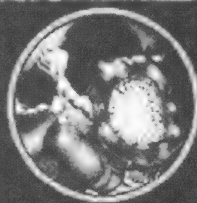


The Oculons are ancient astronomers. You can see all star lanes.

OCULONS

- Description:** Walking eyeballs with acute vision who excel at astronomy.
- Special Ability:** Start the game knowing the locations of all the star lanes.
- Diplomacy:** Trusting and eager to communicate; prefer a neutral stance.
- Characteristics:** Fierce and unforgiving enemies; obsessed with space exploration to see the wonders of other worlds; loyal friends and chivalrous mystics who live by a ritualistic code of honor.
- Species Strategy:** The Oculons' special ability to see all star lanes right from the start is another powerful capability among all the species. This view means that they have a road map to all of the systems in whatever galaxy they may happen to appear in.
- Leading the Oculons is instructive for newcomers to the universe of Ascendancy, since they quickly will learn the interrelated nature of star lanes and star systems. The nexus points, or nodes, that compose individual galaxies can be understood much earlier when leading the Oculons.
- When dealing with the Oculons, remember that their neutral stance and excellent communication skills can result in successful trading. However, they prefer to remain neutral and do not enter easily into alliances with others.

Orfa Special Ability



The Orfa are unfazed by hostile environments. You can build on black planet squares.

ORFA

- Description:** Large, slothful, oxen-like, yet intelligent beasts from a volcanic world who ingest their food through a drill-bit type mouth.
- Special Ability:** Can build on black planetary squares as easily as on any other squares; can survive anywhere.
- Diplomacy:** Laid-back and peaceful; steady, very slow to change minds; subtle empathic.
- Characteristics:** Nonaggressive; able to survive in almost any environment; high intelligence evolved to aid in mating competition.
- Species Strategy:** The Orfan ability to build planetary items on black (dead) squares as easily as any other squares offers a powerful advantage in constructing colonies. And their empathic ability makes them potentially good negotiators and diplomats.
- An Orfan leader who enjoys building planetary resources and colonizing aggressively will do well. Although the Orfa are by nature passive, a strong leader can use the special construction ability to maximize the productivity of individual planets and developing colonies as the Orfa expand across star systems.
- When encountering the Orfa, be patient. Their empathic ability and generally passive approach usually means that negotiations will bear fruit—even if it takes awhile. However, they are survivalists; if threatened they will respond aggressively.

Shevar Special Ability



The Shevar are power-sappers. You can wipe out the power of all alien ships in systems you occupy.

It will take 90 days to amass the energy needed to use your ability.

SHEVAR

- Description:** Inorganic life forms who are masters of the dark forces of life.
- Special Ability:** Can sap the power of all other ships in current round through the use of SAPs.
- Diplomacy:** Unfeeling exploiters; can't practice coherent diplomacy because they don't recognize life in this universe as being true life.
- Characteristics:** Not purposely hostile, but do draw in others' energy; obliterate anything that gets in their way.
- Species Strategy:** As inorganic life forms that suck the life out of everything around them, the Shevar particularly are effective in waging war and invading planets. They don't always win, but their power-sapping ability often weakens an opponent sufficiently to make the difference in warfare. To lead the Shevar is to declare war on the rest of the galaxy; that is their way. A wiser course is to use the energy sapping as a defensive measure early on while building the home world and initial colonies. Then, when expanding into others' systems, the ability can be brought to more offensive use. In dealing with the Shevar—usually from a negative standpoint—multi-staged campaigns are most effective. If the Shevar use their ability to sap energy in one turn, they must wait awhile before it becomes available again. A wise opponent waits until the ability is recharging, then attacks or counterattacks.

Snovemdomas Special Ability



The Snovemdomas are mighty and tough. Your ships all have double-strength hulls.

SNOVEMDOMAS

- Description:** Tough, brave, and stocky creatures who are able to withstand great force.
- Special Ability:** Bodies, dwellings, and all structures almost unbreakable; can design double-hulled ships that withstand great force.
- Diplomacy:** Generally disinterested; respect others rights; agreeable, but will fight if provoked.
- Characteristics:** Alarmingly ferocious when provoked; evolved as pack-hunting predators; searching for new hunting grounds.
- Species Strategy:** With the strongest ships and the toughest bodies of any species, the Snovemdomas are difficult to bring down. This defensive capability doesn't diminish their predatory nature, but they are not overly aggressive.

In combat, a strong-hulled ship with moderate firepower and a replenisher is often more potent than a normally shielded ship with high firepower. Whoever is around to get in the last shots may take the field. Leading the Snovemdomas allows a wide range of approaches to colonizing, invading, diplomacy, and ship-to-ship combat.

Those who would oppose the Snovemdomas would do well to bring plenty of backup firepower to any confrontation. The toughness of their ships means that a war of attrition is generally won by the Snovemdomas. But they are agreeable enough to use diplomacy, unless in a particularly hostile atmosphere.

Swaparamans Special Ability

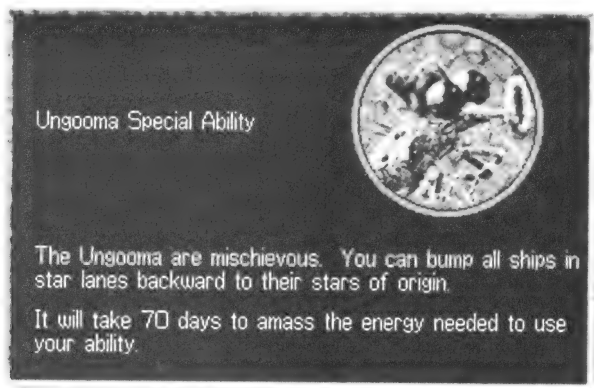


The Swaparamans produce extra power. You can double the power of all your ships.

It will take 62 days to amass the energy needed to use your ability.

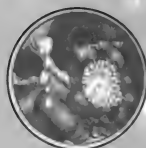
SWAPARAMANS

- Description:** Pseudopod-laden fungal animals who are distantly related to the Frutmaka.
- Special Ability:** Can double the power available to a ship for a turn through SAPs.
- Diplomacy:** Steady, yet wary; slow to develop trust in negotiations.
- Characteristics:** Generally peaceful; find strength and power in adversity; unforgiving if betrayed.
- Species Strategy:** The cautious Swaparamans have a powerful weapon that can be used periodically through an accumulation of SAPs. By doubling the power of a ship, the Swaparamans suddenly elevate both offensive and defensive strengths instantaneously.
- A smart Swaparaman leader will recognize the great tactical advantage that power doubling offers. When saved for just the right moments, this power advantage means the difference between victory and defeat in combat. At the same time, the Swaparamans can approach others for diplomatic negotiations and even alliances.
- Those who encounter the Swaparamans will find them generally distrustful of alliances, even when trading technology or star lane information. They can become allies, but it usually takes a long time.



UNGOOMA

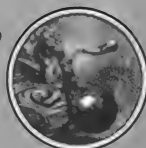
- Description:** Tiny brain parasites who collectively are able to use mind control on others for brief periods of time.
- Special Ability:** Can bump all ships currently in star lanes back to their home world stars through the use of SAPs.
- Diplomacy:** Relatively trustworthy and agreeable; will go to extremes to build trust; can cloud other species' minds.
- Characteristics:** Fearful of other species; desire to remain undiscovered, yet intensely curious.
- Species Strategy:** The Ungooma's special ability is primarily defensive in nature. Given their desire to hide from others, they usually do not make good allies or easy trading partners. They can sound most agreeable, but usually are operating from a position of cowardice rather than mutual respect.
- An Ungooma leader periodically can play havoc with the flow of other ships through star lanes. This can be a powerful defensive move to ward off attacking aliens; and it generally can disrupt all species' plans. In a race for virgin star systems, the Ungooma's ship-bumping talents can help them colonize more rapidly in new systems.
- Those who face the Ungooma will generally find their diplomacy obsequious at the same time that they are trying to solidify power and position. While not overtly aggressive, they cannot be trusted as allies.



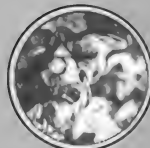
The Orfo



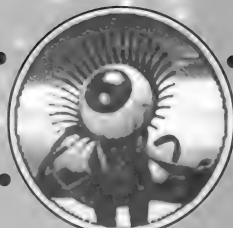
The Gavorom



The Fludentri



The Capelons



The Oculons



The Shevar



The Frutmaka



CHAPTER 3

AN ODYSSEY AMONG THE OCULONS



We Oculons
are no doubt
farsighted.
But are we
bold enough
to do more
than observe
our universe?

The universe is a cold place, and not in temperature alone. The great *Ascendancy* cosmos is a realm filled with intelligences vast and cool. Among those intelligences are the Oculons, an ancient and mystical species noted for their courtly manners, steadfast loyalty, and arcane knowledge.

But they also are known for their farsightedness, a characteristic that means much more than meets the eye. As living telescopes, the Oculons possess an encyclopedic knowledge of the star lanes around their home planet.

This is their special ability, and you will soon discover just how special a feature it is. No other species in the vast reaches of the universe possesses this perspective.

Now, let's watch the unfolding adventure of the ancient Oculons as they take their first steps skyward in a sparse-density, neutral-atmosphere universe inhabited by six other species . . .

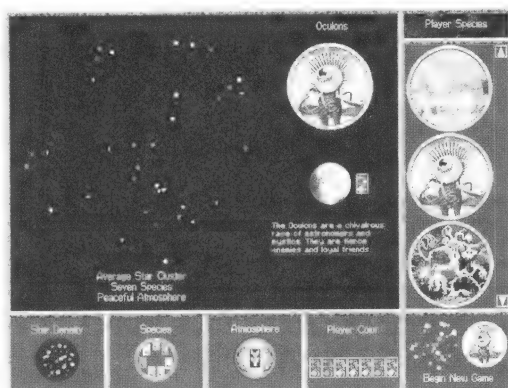


Figure 3-01.

The Oculons prepare for a new day among the stars and star lanes of the cosmos.

THE LONG VIEW

You have not seen me, but I have been watching you.

I watch everything. That is the way of Oculon destiny. That is our perspective as Oculons, and it is our mystical tradition. Our view is our world and the pathways to other worlds. And now our great longing—to do more than just observe—is finally to be answered. So sayeth Jhitan.

Jhitan, the Oculon Far Seer, reads the starry night much as other species read a coarse map of their city or their world.

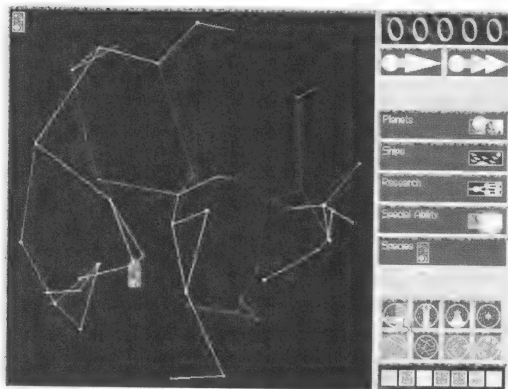


Figure 3-02.

The star lanes that we see connected to our planet are invisible to other species—at least until they travel them.

And I, not yet even a Lesser Seer—more of a Glance—am called Myope of the Retinal Focus (or family).

Hurble III, our home world, is a large Cathedral planet (a high-quality world), and sits within the system nexus of a dozen busy star lanes. We watch from afar as species travel these lanes, actually moving their physical bodies along the lanes we have studied for so many eons.

What I see, I record. And what you see here, I let be seen. It is a telling and a foretelling, since it is the Oculon way to know that what has passed is yet to be and what will occur on the next day has been forever. (I must admit that I find some of our philosophy rather difficult to see through. But then, I am just a Glance.)

I will now tell you of Jhitan and how he has led, and will lead, the wondrous Oculon ascendancy. Our Oculon code of honor requires that we transmit honestly all that we see. I can do no less. Surely even you can see that.

And so it begins . . .

STARS IN THEIR EYES

DAY 1 — Praise be to Jhitan, the Far Seer of the Oculons!

Our leader of leaders, Jhitan, has seen that our future now lies in physically traversing the star lanes that our species has studied long before history was recorded. There is much excitement among the extended Retinal Focus, a family that includes almost a fifth of the entire Oculon species. Members of the Retinal Focus have been among the high counselors to the Far Seer from the time of the great Retinal Detachment, a turbulent period that is meant for another telling.

The counselors have looked deeply within Jhitan, and they are in agreement that his vision of the future is correct. And so this day is to be called in the history spheres the Day of the New Look! And the New Look will lift our bodies from Hurbie III and send us skyward—something no Oculon has ever done.

True, some of the elder Oculons, especially those of the conservative Soft Focus, look askance at these plans and roll their eyes. But they dare not confront Jhitan, for it is said that in the face of opposition, he does not blink.

As our eyes have scanned the heavens for these many centuries, we have seen other species come and go. We know that there are at least six other species in this universe, but we have yet to meet even one of them eye-to-eye. If our destiny is to be achieved, we shall meet them all. How odd this will be! I can scarcely imagine what such contact will be like.

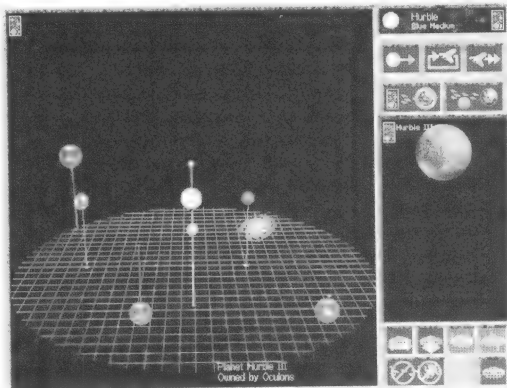


Figure 3-03.

Even our own beloved Hurbie star system has yet to see an Oculon playing among these worlds.

The great Jhitan has intuited that the Oculon species must quickly develop the technology we currently lack to leave this solid

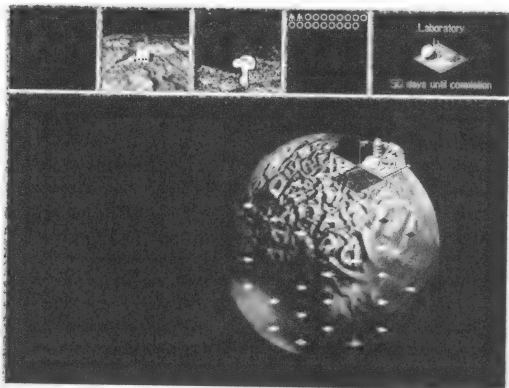


Figure 3-04.

Our Oculon scientists have moved quickly from a history of no practical research to our first laboratory.

world. Now, for the first time in Oculon history, I see our great people turning their gaze inward, toward industry, technology, and growing prosperity. We are to become more than just observers.

Every moment seems to bring a new revelation. Jhitan and the senior counselors—who are called the Eye Bank—send visual thought projections among all Oculons. These are great

visions that unfold behind the lens of each Oculon mind. As a Glance, there is still much that I do not understand. But I study very hard to be able to remember all that is broadcast.

Only moments ago, Jhitan issued an image of our own Hurble III home world, and from it came what appeared to be space ships bearing the Oculon seal and flag. They had lifted from Hurble III and sped into the inky sky. This is his prediction!

THE EYES HAVE IT

DAY 50 — My eye is wide with astonishment! In just fifty short days, Jhitan and our senior counselors have put many of our people to work on the construction of a research laboratory. Today it is completed, and we embark on a bold research project that will result in technology to lift us from Hurble III and into the stars.

Jhitan and the Eye Bank are in continuous projected visual discourse. The images fly fast, and the blurring that I see has

more to do with my own young opticals than the vision of our leadership. That I know and must accept for now.

The latest visual images show what appear to be three separate rings. These are rings of knowledge, and they shall form a tree of technical research. I am unfamiliar with this concept, but the context seems to be that the Oculon path must choose research that would immediately further our desires to begin space travel and to see the farthest reaches of the galaxy.

The rings are visual representations that include subject areas of research, some broad and open-ended, others narrow and targeted. Even my young eye does not need a focusing glass to see that the rings that are chosen ultimately will steer us down one course or another.

FREE RADICALS

The latest visual torrent of information shows a note of growing discord among our planners. While all Oculons have felt an inner longing to travel the star lanes, there is a small group called the Free Radicals who wish to avoid “planting” the Oculon seeds among other planets. They favor an active star travel plan, but with an emphasis on our ancient role of observation.

Jhitan and several of the Eye Bank view their ideas favorably. The Great One’s true vision is centered on observation. All of our culture and our sacred traditions stem from Hurble III,

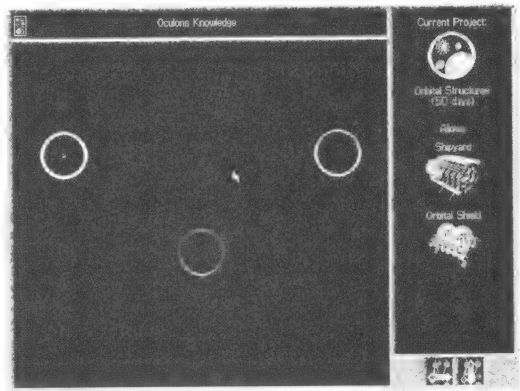


Figure 3-05.

The vision quest for orbital structures to start the Tree of Knowledge is a powerful image shared by our leaders.

argue the Free Radicals (who include several Lesser Seers!). Why, they continue, would anyone wish to weaken our bonds by spreading—some call it colonizing—among the planets and stars? I think this argument bodes ill for our usual single-minded unity, and I find myself leaning toward those who would colonize.

I project this thought only to my personal memory, for it would be the height of presumption for a Glance to spread this image to others. Perhaps when I have grown to become a Look or a Stare, I shall be bold enough to share such images.

In the meantime, Jhitan and the council have moved swiftly to begin our first factory. They see clearly that technical research without industry cannot sustain itself. And industry without prosperity cannot long survive.

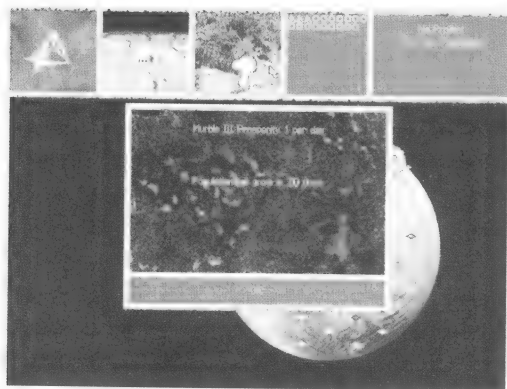


Figure 3-06.
We must provide conditions for greater prosperity in order to increase our population.

DAY 80 — Our first factory is complete. Already I can sense that there is a pattern to this combination of research and industry. But for all of us, these practical considerations are new; they are disturbing. Even now, I can see many Oculons who long

for the simple days of star gazing. Well, those days are gone. And I sense something is lost as well as found.

We are in the process now of building an agriplot on Hubble III, a project that Jhitan and the elders view as an underlying boost to our population growth and well-being. This, then, is another aspect of the balance that I am learning from our leaders: Continually support industry, research, and prosperity in their turn. Never let there be a time when a project is not under way.

If our prosperity is not sufficient, then there will not be enough Oculons to go around!

If our industry is weak, then there will be insufficient materials to sustain growth.

And if there is too little research—or the wrong kind for our goal—then we shall lag behind other species in the universe.

I am told that we are undergoing what is called a learning curve.

ORBITAL STRUCTURES

DAY 100 — Ah! The first of many milestones! Our scientists report that we have discovered orbital structures, a first mighty step toward ascending to the heavens.

The scientists immediately began to follow a new research ring—interplanetary exploration, one of three possible research paths available to us now. (The scientists have an element of Free Radicals within them who are quite vocal.) But just as immediately, a controversy has broken out.

Several important members of the Eye Bank, including the great Jhitan, favor interplanetary exploration since even our Lesser Seers can see that this leads most directly to the technology that allows the construction of spaceships and of generators such as a proton shaver.

A few others believe that research into the mysterious Tonklin Diary will let us develop ship engines based on—and here my vision is blurred—an element of momentum theory. Called the

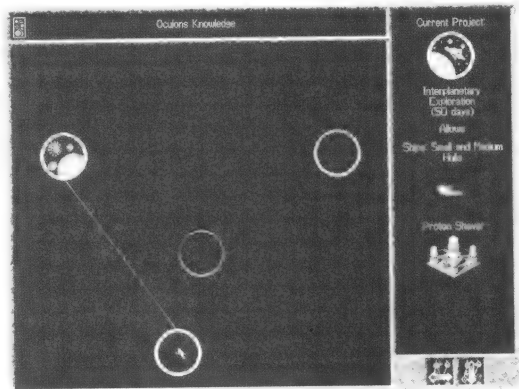


Figure 3-07. The decision over which research path to follow will color our view of the universe from the start.

Tonklin motor, it would appear to be quite inexpensive to develop. But will it bring us closer toward our goals?

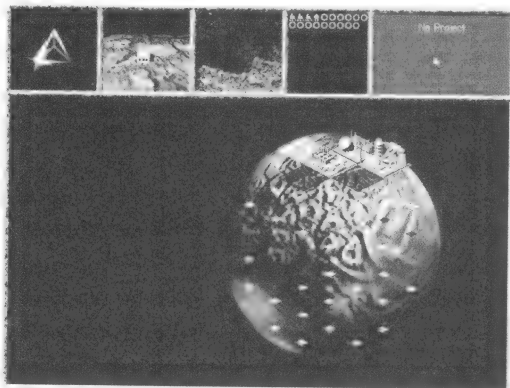


Figure 3-08.
Hurbles III is a large Cathedral planet, quite conducive to growth.

drawn into a somewhat heated debate today with two Stares, a Look, and three of my fellow Glances. When a Lesser Seer broke up the projected arguments, we realized that we had been emanating a visual disturbance.

The real argument comes from most of the Eye Bank, who make a strong visual projection for taking a research path toward xenobiology. This budding science would take us more swiftly toward technology conducive to colonization rather than just space travel.

I expect more fireworks over this debate, and there shall be no shortage of blinksmanship. Even I was

PLANET CATEGORIES

DAY 110 — One of our greatest strengths as a farsighted people is that our many eons of stargazing have allowed us to classify the types of planets that are scattered throughout the galaxy. Passed down from seer to seer and from teacher to pupil over the centuries, these planet categories are best understood by Oculons as images of color.

For example, if a planet projects a black and forbidding hue, we call it a Husk world—not much of a place without terraforming (or world rebuilding and reseeded).

Even as little Winks, we are taught the eleven categories of planethood. And though we are told to keep this to ourselves, I

see fellow Oculons speaking of these more and more now that we are soon to be among the colonizers of planets. The categories are:

- Husk Planet** Visualized as all black (dead).
- Primordial Planet** Perceived as 50 percent white and 50 percent black. This means that half of the planet is acceptable for colonizing and half is dead.
- Congenial Planet** Only about 20 percent of the planet reveals black.
- Eden Planet** Reveals no dead (or black) areas. Most areas are acceptable (white), and some areas actually promote population growth and prosperity (displayed to us as green), industry (visualized as red), and research (shown as blue).
- Mining Planet** While we see such a planet as about 40 percent black, there are red and white hues that favor industrial growth.
- Super Mining Planet** We see such a planet with only 20 percent black, a 20 percent element of red, and the rest white.
- Chapel Planet** Almost 40 percent of such a planet is perceived as black, but there is as much as 10 percent of a blue projection, indicating a strong base for research.
- Cathedral Planet** This classification is a super-research planet (about 20 percent blue in our visual projections).
- Rich World** These worlds, while still about 40 percent black, show 10 percent of each of the life-enhancing red, blue, and green colors. The rest is white.
- Tycoon World** We see these robust planets having as much as 15 percent of each of the life-enhancing red, blue, and green colors.

Cornucopia World

These planets are very rare and contain approximately 33 percent of each of the red, blue, and green areas. There have been Oculon contests to see who can find the occasional Cornucopia world. They are not easy to make out, and at times the rewards have grown to quite massive amounts of rich mineralized ocular wash before a lucky Oculon spotted one.

DAY 115 — Our first agriplot is complete, and not a moment too soon. I now see that Jhitan's vision of constructing the

agriplot was a good one. We are all—down to the last Oculon—currently busy with our ascendancy (as our progress is now called). And we need more population to reach our goals. There is nothing sadder, in my eyes, than an overlooked Oculon.

Fierce debate has again broken out between those who support the Free Radicals' desire for "space travel for space travel's

sake" and those who speak out in favor of colonization. So heated has the argument grown that two Lesser Seers were poked in the eye today during a visual projection debate. (Of course, with us, it is difficult to avoid being poked in the eye almost on a daily basis. But this was on purpose!)

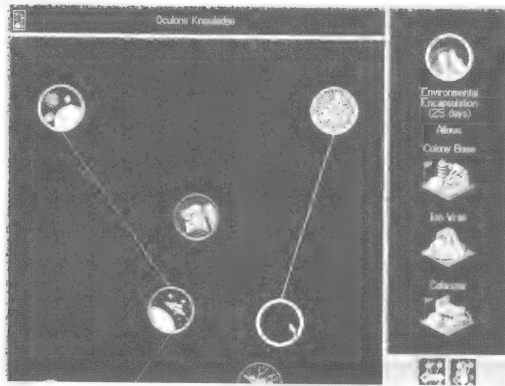


Figure 3-09.

Xenobiology allows our scientists to start work on environmental encapsulation.

INTERPLANETARY EXPLORATION

DAY 150 — Events move swiftly. Interplanetary exploration has been discovered! Jhitan has forbidden the study of xenobiology, standing with the Free Radicals' focus on the Tonklin Diary and the desire to reach out to the stars as quickly as possible.

Although I am still wet behind the lens, as the saying goes, I can see both sides of the argument—we Oculons generally see both sides of everything—and I now believe the Jhitan may be wrong. How can a species hope to survive if it does not actively seek to establish new worlds? This is the first time in my young life that I have disagreed with Jhitan, and my eye is streaming!

DAY 170 — I am taking a keen interest in both research and in our planetary projects. These two elements of our ascendancy seem to be the keys to keeping us in a balanced advance.

Today, our leaders have begun building transport tubes that will facilitate the swift expansion of our colony's growth. There are so many details such as this in our efforts. Thrilling, yes; but so much is unknown!

DAY 200 — The Tonklin Diary has been discovered! This research allows us to focus on the technologies surrounding spacetime surfing, which, in turn, will bring us star lane drive capabilities. We have seen this in other species over the millennia; but it is all so different now that we are a part of it.

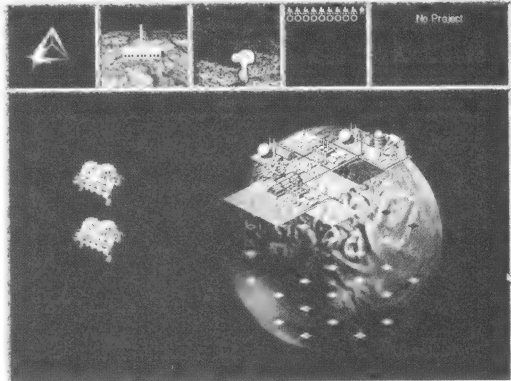


Figure 3-10. Since the Orfa visit, our strategy has grown to include construction of two orbital shields and a surface shield.

Our scientists now turn to superconductivity research. This is something of a surprise, since our elders report that its most immediate results will be in the areas of planet surface shields and mass barrage guns. These are defensive and offensive weapons, respectively. Does this sudden twist in our research priorities point to a change in the great Jhitan's view of our goals?

DAY 248 — My surmise was correct! Today, Superconductivity was discovered. Jhitan immediately broadcast a vision that showed Oculon colonies on other worlds! The Free

Radicals are in disarray. Apparently, Jhitan has noticed a shift among the other species that we have watched from afar for so long. For the first time, his vision shows, we are becoming an object of interest, or at least curiosity. Hence the interest in surface shields.

Jhitan has beamed another image, allowing research into xenobiology and thus colonizing technol-

ogy. My own personal faith in Jhitan has been restored, and I am excited by this new research path.

On a separate note, I have been elevated from a Glance to a Look.

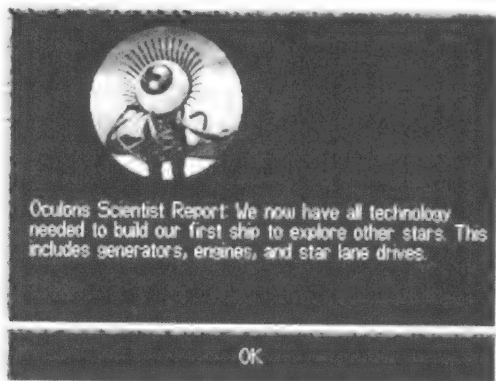
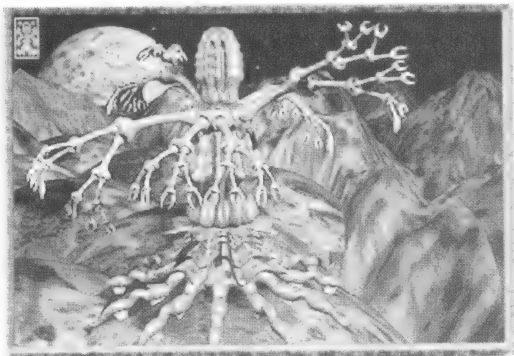


Figure 3-11.
We have the technology to build starships. But what about weapons?

ENVIRONMENTAL ENCAPSULATION

DAY 318 — Environmental encapsulation has been discovered, and I begin to see more clearly the strategy that Jhitan and the Eye Bank follow.

This research permits exploration of advanced chemistry, which in turn permits development of what Jhitan and the elders project will be an ion banger—a drive superior to the Tonklin drive. And so we leapfrog in our research by not grabbing onto everything that first comes our way.



Sometimes it is better to wait and achieve greater technology than to rush into the first discoveries that come to us. So it is with space travel. Our strategy now is to wait until we have much more research before outfitting starships. But I ask myself: Is this the prudent and powerful way to approach leaving Hurble III, or do we run the risk of waiting too long to colonize? The answer is beyond this Look's understanding.

DAY 329 — The Orfa have arrived! Our first eye-to-eye contact with another species after eons of seeing their ships plying the star lanes. They are curious little creatures: ugly, with the tiniest little eyes—two of them apiece! (What possible good could TWO eyes be?)

DAY 338 — Work began today on our first shipyard. Once completed, we will vigorously pursue our first spacecraft. Also, advanced chemistry has been discovered, and that, say our visionary leaders, is a step toward star lane drives.

Figure 3-12.
The haughty and aggressive Shevar have arrived.

SPACETIME SURFING

DAY 413 — Spacetime surfing has been discovered. Jhitan broadcasts that this leads to several other related areas of research. We shall concentrate on power conversion and its long-term access to orbital missile bases and a subatomic scoop (a powerful ship generator).

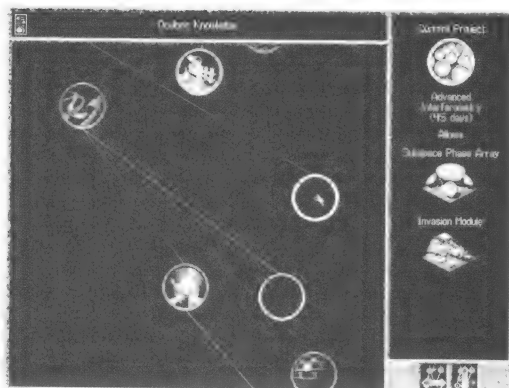


Figure 3-13.
If we ever have an opportunity to use invasion modules, I hope it will be on the arrogant Shevar!

There is always something new being developed. One of our newest projects is an artificial hydroponifer, an extremely efficient nourishment production facility that will raise our prosperity even faster than an agriplot.

DAY 463 — Power conversion has been discovered, allowing (among other giz-

mos), a concussion shield for our future ships.

The Shevar have quickly declared war on us. The energy-sapping power of the Shevar has demolished the two orbital shields around Hurble III. Our scientists can do nothing but start to build new shields.

On a happier note, our study of spectral analysis has yielded technical information on advanced interferometry. And that—oh, mighty Shevar—points us in the direction of invasion modules!

DAY 681 — In the blink of an eye, the Shevar have sued for peace! And this time, at least, their visit didn't end up sapping all the energy out of our orbiting gizmos.

Well, the decision makes me vaguely uneasy, but Jhitan has broadcast that we shall build no spacecraft before we have more weapons technology. The recent Shevar unpleasantness has, no

doubt, caused many second looks at our strategy. But I think it is too slow! (Did I accidentally broadcast that or keep it to myself?)

STAR LANE KNOWLEDGE

DAY 890 — The Orfa have offered to trade star lane knowledge with us. Since we have the best star lane knowledge in the universe, that is not a surprise. But what is in it for us? To be good neighbors—and to build friendship—we agreed to trade knowledge.

Our leaders are taking a bold step. Instead of proceeding after more short-term research projects that can have immediate benefits, the decision has been made and approved to seek cloaking technology. But that research will take almost a thousand days! Do we have that much time? Are our efforts at defense and self-protection the wisest course in a universe that appears to be moving boldly around us?

DAY 1037 — We continue to trade information with the Orfa on an occasional basis. But it is the vision of all Oculons that they cannot be trusted.

And this points to an important lesson I am learning in diplomacy and negotiation. We Oculons are, by nature, honorable and passive. We do not immediately resonate positively to brutes such as the Shevar or weasels such as the Orfa.

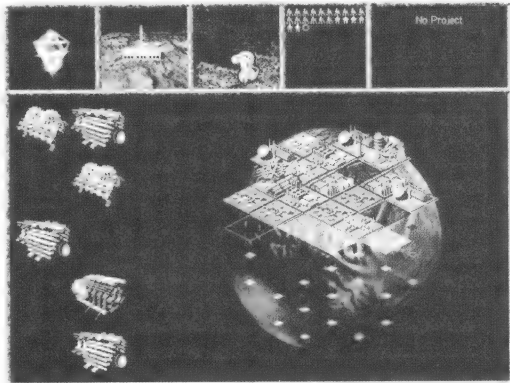


Figure 3-14. Fortress Hubble III—with two orbital missile bases, two orbital shields, and a surface shield.

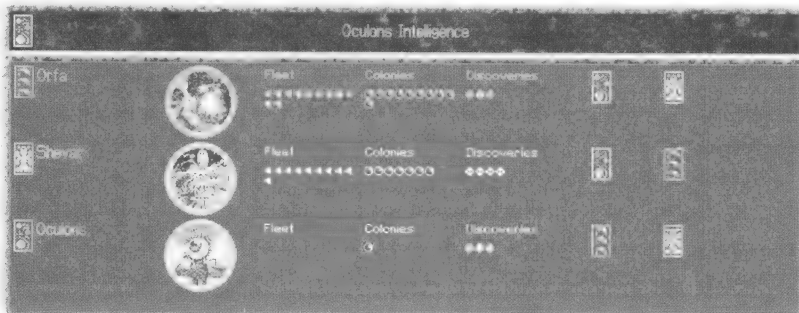


Figure 3-15. After much extensive intelligence gathering, the results are clear. We have no colonies, and we have no fleet.

But unless we wish to stay forever on this planet, we must learn how to strike deals with our neighbors that help both parties. Giving away star lane technology just to be friendly could backfire on us.

DAY 1191 — We have at long last discovered cloaking. And molecular explosives will be the next target of our research. We are relentless in our research, but sometimes I feel that we redouble our energy when we lose sight of our goal.

A good, sound strategy that can be followed without major shifts in focus is a wondrous thing indeed. I am afraid that is not our history to date. Are we trying to reach for the stars now, or have we reverted to type and headed toward a passive defensiveness?

Well, if hunkering down on Hurble III is our goal, we're doing a wonderful job of it! As I prepare for the ceremony that will raise me from a Look to a Stare, I feel a growing frustration and fear that we are still moving too slowly for this busy galaxy.

DAY 1371 — Our scientists have discovered molecular explosives. I can see that the time will soon be upon us for our first spacecraft to be built.

FIRST SPACECRAFT

DAY 1403 — The day I have been waiting for! We begin construction of our first space ship, to be christened *Eyelineer 1*. Perhaps our leaders are ready now to boldly go where no Oculon has gone before.

DAY 1499 — The *Eyelineer 1* is complete and is being outfitted even as I project this to my journal! We are loading in many of the discoveries that have been made over the past 1500 days. Soon it will be launched and a new day will be at hand.

DAY 1520 — My eye is as downcast as it has ever been. We outfitted the *Eyelineer 1* and launched it—without a GENERATOR! I am sick. My eye is streaming.

The fools who loaded our first ship and sent it skyward didn't skimp on extras. There is cloaking technology and all the latest gizmos—but no generator to make everything run! Now the briefly proud *Eyelineer 1* sits just outside a Hurble III orbit, drifting much like our leaders' long-term strategies. For the first time in my ocular existence, I am ashamed to be an Oculon. (Sigh.)

Our leaders, eyes rolling, now believe that it will take the discovery and construction of orbital docks to retrieve the *Eyelineer 1*—if it can be done at all. We would abandon and blow up the damned thing if we had the energy and the know-how.

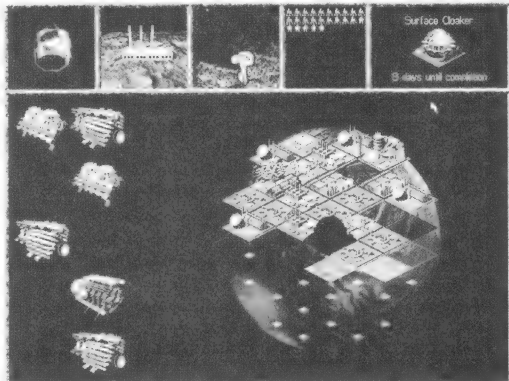


Figure 3-16.
Eight more days
and our surface
cloaker is
completed.

PINK EYE

DAY 1619 — Many days have passed, and I am pleased to report that my eye is uplifted and I believe we are on the

right path again. Our first (successful) ship, a medium-class spacecraft christened the *Pink Eye*, is beginning to explore the nearby star lanes.

We have long known that the Hurble system is in something of a cosmic cul-de-sac, with only two or three star lanes that lead to the less encumbered lanes in a denser portion of this galaxy. It will be of the

greatest fascination to discover who and what are among the planets at the other ends of the star lanes we've observed.



Figure 3-17.
Meet the
Gavorom, a
species revered
for their
planetary
nurturing.

DAY 1630 — After taking a quick look at the Fomalhaut system, the *Pink Eye* headed back to the Hurble system almost immediately. Not only are most of the planets there already owned by the Orfa, but there is no other star lane. We had hoped to find planets to colonize. Is it possible that my worst fears have come true, that we have waited too long?

DAY 1650 — *Pink Eye* reports back from the Delphinus system, which includes five planets and three star lanes. Nothing terribly promising there, but we are just getting the feel of what's available.

DAY 1666 — The Orfa are everywhere! That is the report from the *Pink Eye* as it travels in the Hannibal system.

FLUDENTRI SHIPS

DAY 1710 — Upon entering the Mira system, the *Pink Eye* received a mysterious transmission and then immediately was confronted by no fewer than ten Fludentri medium-class ships!

It becomes apparent that our long hermitage upon Hurble III was a cruel joke on ourselves. The universe waits for no one, and the going will be tough for us, I fear.

DAY 1749 — The *Pink Eye* has returned to our own Hurble system. It appears that our cosmic cul-de-sac may well be our prison. We are surrounded by Orfa and Fludentri in the nearby star systems.

Jhitan and the Eye Bank continue to believe that things will look up, if only we persevere. What choice do we have?

Our strategy now, as projected by Jhitan today, is to continue to build our resources until we can break out of the Hurble system with a couple of powerful starships. We will have to take on the nearby Orfa or try to make it to another star lane for more extended exploration.

It amazes me that we Oculons, who can see so far, could not see this coming!



Figure 3-18.
The Fludentri are just looking for a fight; and we're definitely outgunned.

THE ORFA AND WAR

DAY 1823 — The Orfa, those miserable beady-eyed traitors, suddenly have declared war on us! We did not provoke them, but perhaps they saw our general weakness. When the Orfa see an opening with little risk, they become bold.

DAY 2024 — The still-drifting *Eyeliner 1* has been destroyed by the Orfa. Perhaps it is for the best. The *Eyeliner* had become a floating reminder of our mistakes.

Now, we begin to build a new ship, the *Sore Eyes*, surely to be a welcome sight for us when finished.

This is another lesson that I am learning. Always follow the destruction of a ship with the construction of another. The universe will not wait long for those who do not continually reach out—no matter what the adversity.

DAY 2030 — The Orfa can't seem to make up their minds. They have sued

for peace with us, shortly after we launched our newest ship, the *Sore Eyes*.

DAY 2046 — Our scientists, spurred on by the recent peace negotiations, are moving swiftly toward gravitronics. This will lead not only to orbital docks for refitting our ships, but also to a weapon called the molecular tie down, which temporarily immobilizes all known ship engines. Just in case the Orfa decide to get belligerent again.

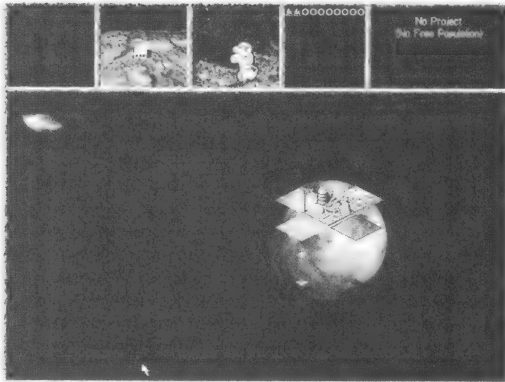


Figure 3-19.

We have established our first colony, on Hurlink IV, within our own system.

THE CAPELONS STOP BY

DAY 2098 — The Capelons are an odd-looking mass of flowing fibers. But their prowess at protecting or camouflaging planets is well known. We exchanged greetings, and then they moved on.

DAY 2100 — Careful research from our intelligence efforts ranks the various species in this order, according to size and power: Fludentri, Govorom, Capelons, Orfa, Shevar, and us. Several of the races are in a bitter conflict, which may be why we have been left largely alone. The Shevar are fighting three races simultaneously!

DAY 2136 — News arrives that the aggressive and war-prone Shevar have become extinct, destroyed no doubt by their own ambitious attacks throughout the galaxy.

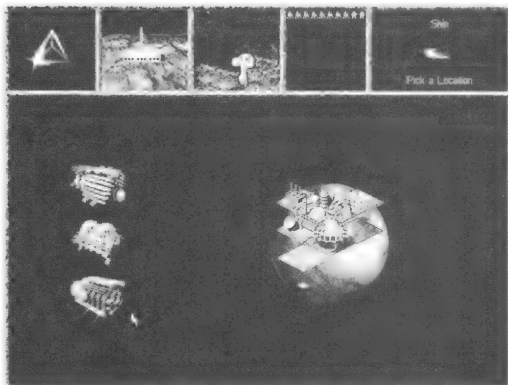
This is a great lesson for us. At a time when we feel overwhelmed by the advances of other species, we see that the once-mighty Shevar have been brought low by the exact opposite of our approach. Perhaps, as Jhitan says, there is a balance in this universe. But one must find that balance first. Not an easy quest.



Figure 3-20. We meet more of our galaxy neighbors, the Capelons, but our conversations are brief and formal.

DEATH OF THE SHEVAR

DAY 2145 — The Orfa again declare war, thus earning the prize for the most two-faced creatures in the galaxy.



DAY 2146 — Well, the miserable little cretins have wasted no time. They have destroyed our ship, *Sore Eyes*. We await completion of construction of the *Ocular 1*, which is being built on Hurblink IV.

My fear is that we are now too weak for this universe. But—unlike the Shevar—we still exist.

Figure 3-21.

We are constructing a ship on our colony, Hurblink IV. We always must have two ships for our home system.

ANOTHER LONG VIEW

DAYS 2211-2221 — Both the *Ocular 1* and *Lenscrafter* medium ships have been completed and are moving out to search the stars.

Ocular 1 reached the Delphinius system, but the Orfa were everywhere. And so the *Ocular 1* moved on to the Hannibal system.

DAY 2232 — The *Lenscrafter* has been lost in battle. Jhitani says that we have entered a long period of attrition and cosmic balancing. While other species may try to build, we shall readopt our former policy of observation.

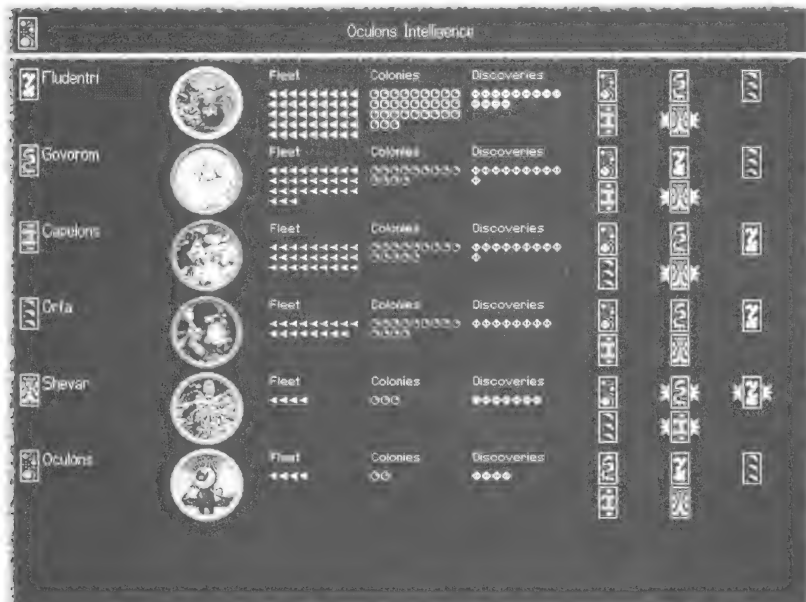
While I do not like the long-term consequences of this decision, I do understand the visions that have made it seem attractive.

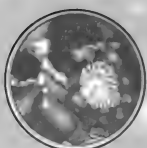
The Oculon Ascendancy has been formally dissolved by Jhit-an, who is said to be considering isolated meditation for some upcoming eons. While it is impossible to predict the ways of the star lanes, my own feeling is that the Oculons will survive in the long run.

As I prepare to take my vows today as a Lesser Seer, I too prefer the long view. And someday I see a vision of a second Oculon ascendancy and of a Far Seer named Myope.

Figure 3-22.

Our intelligence reports indicate that we are at the bottom of the barrel in terms of number of colonies and discoveries we can call our own.

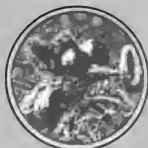




The Orfo



The Govorom



The Ungooma



The Bailfids



The Swaparamans



The Frutmaka



The Hanshaks



CHAPTER 4

THE CURIOUS ANTI-ASCENDANCY OF
THE BALIFLIDS

A Baliflid character, a small, furry creature with large, expressive eyes and a wide, toothy grin. It is standing on its hind legs, holding a long, thin, coiled object (possibly a whip or a long pipe) in its front paws. The background is a simple, stylized landscape with rolling hills and a bright, hazy sky. The overall tone is whimsical and lighthearted.

The
disarming
Baliflids take
the galaxy
less seriously
than any
other species.

Small, cute, and quirky—those are the hallmarks of the Baliflids. How did these fun-loving creatures manage to survive and thrive among the many aggressions, betrayals, competitions, and cruelties that frequently upset the peace and quiet of the universe?

Those who travel the galaxy both wide and far will understand that not all is what it appears to be. So it is with the Baliflids. Yes, they are full of good humor and take the galaxy less seriously than any other species; but the Baliflids also have a keen sense of their place in the larger scheme of things.

They are a disarming species, and never more so than when they gather to tell the stories of their curious inward Ascendancy.

Read, then, from the diary of Gaeruth, the merry Old Storyteller of the Baliflids, and digest his mirthful suggestions for survival on the home planet Almaviva in a very dense, peaceful galaxy inhabited by six other species . . .

HANSHAK CONTACT

DAY 1 — *We began construction of our first laboratory on this merry day that I'll call Day 1. I could call it Day 100 or Day*

1000 if I wish, because the diary is mine and so is the ancient quill I use and the ink that flows from it.

Today the Baliflids were introduced to the Hanshaks. The sudden arrival of these round telepathic mind-bodies was occasion for great excitement and even more fun than usual. Groups of young Baliflids scampered beside these strange, doughnut-shaped beasts, laughing and tugging at them and calling them names. The Hanshaks took all in good grace and telepathically assured us of their desire for friendly relations.

We did not have to use our diplomatic magic on them, for they value harmony and communication just as much as we do.

(They just don't seem to enjoy themselves as much!)

Our first dealings with the Hanshaks have made us realize the need for our society to progress beyond its peaceful, prosperous, but mainly pastoral status. There are others besides the Hanshaks whom we shall surely meet—and they may not be as peaceful as the Hanshaks. Our way must be as purposeful as it is humorous. (Even if our

goals are not as easily visible as our humor!)

We understand and appreciate that knowledge is wealth beyond all measure, and so we started work on our first true research laboratory.

The Hanshaks, while in no way threatening, are quite guarded. At present, they see us neither as trading partners nor as allies, but we've left the door open for further negotiations.

While there's no dearth of fun here, there's also no shortage of effort to make our home safe, secure, and happy.

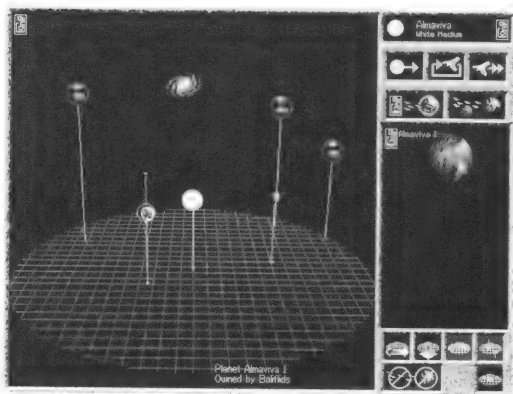


Figure 4-01.

The relative lack of star lane gateways in the Baliflid's home system may reduce the number of uninvited visitors.

DAY 50 — With our first research laboratory now completed, we've progressed to a study of the types of structures we'll need to build around Almayiva for our dealings with other species who will find their way to our small but fruitful planet.

To aid in the eventual construction of such space structures, as well as to contribute to the general prosperity of the Baliflid people, we also are eliciting designs for our first factory complex. We need to boost our industry as much as our technical research.

Our first lab research will focus on orbital structures having to do with space flight. (However, our overall desire to venture into the spaceways is as limited right now as our desire to miss our next meal!)

DAY 75 — The tenacity of our scientists has paid off quickly with the discovery of orbital structure design and construction techniques. Who says that we play too much?

But having orbital structures will not be enough; we must also attempt to understand both other species and the differences in each of their environments. We shall do this through xenobiological research. While the results of this technology seem rather academic at this point, we hope that subsequent discoveries derived from this basic research will be of more practical value.

DAY 80 — Our first factory is complete and already cranking out the items required to elevate our society. Workers, however, do not function well on empty stomachs, and Baliflid workers produce absolutely NOTHING when hungry.

While our farmers could provide ample food for earlier, simpler times, the demands of an industrial society call for more efficient food production. For this reason, we've begun to lay out our first agriplot which should, along with others of its kind, keep the food stores full for the challenging times ahead.

DAY 90 — First agriplot finished! That keeps food on the table and our population climbing!

THE THREE BASICS

DAY 94 — With research, industry, and prosperity—the three basics of our new infrastructure—completed, we can at last look outward into space. While the Baliflid people have little or no interest in journeying beyond the gravity well of

Almaviva, we realize that other species are not so tethered to their home planets.

Although we do not assume our interstellar neighbors are overtly aggressive or even keen to invade Almaviva, we can't afford to overlook those possibilities. Some among us have called for more potent defenses, but I feel that anything more ambitious than a passive orbital

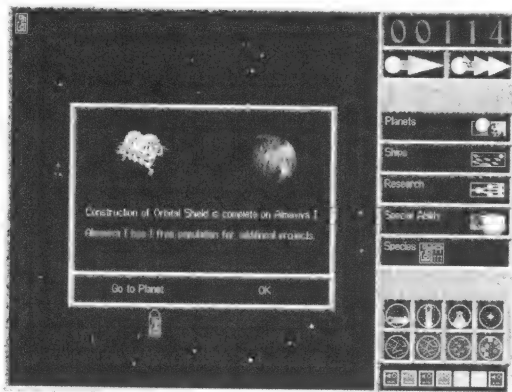


Figure 4-02.
Orbital shields
are a crucial
part of Baliflid
defenses.

shield would not only be beyond the reach of our present technology, but perhaps also too provocative to a visiting alien ship.

So this is our current strategy: We shall build our infrastructure, be a more than pleasant host to all who visit, and stay away from the perils of interstellar exploration and colonization.

DAY 113 — Since our first contact with the Hanshaks, many on Almaviva have lived in fear that despite our innate ability to force aggressors to make peace with us, we Baliflids have been living on borrowed time. Now that a new star circles Almaviva (our first orbital shield), we all sleep more soundly. On a more mundane note, our engineers have discovered new land areas suitable for agriculture, manufacturing, and research facilities. The only problem is their inaccessibility. A new system of transportation tubes should remedy this situation.

DAY 118 — The first section of transportation tubes has opened up several new areas. It has been decided that a new factory should be top priority for our engineers. Industrial capacity will be a cornerstone of our growth.

DAY 120 — In relatively little time, the secrets of xenobiology have been revealed to our researchers. On the very heels of this news, however, come rumors of a mysterious book by an obscure, reclusive scientist named Tonklin, hinting at amazing new technologies. If only we can find this valuable tome.

BUILDING A PROPER PLANET

DAY 128 — To keep up with the health and prosperity requirements of the workers at our new factory, a second agriplot has been started. We are attempting to maintain a one-to-one relationship among our manufacturing, agricultural, and research complexes. We sense that the universe favors balance in all things.

DAY 136 — Truly, our construction experts are miracle workers! As soon as they completed the new agriplot, they began construction of yet another section of the transportation tube network in anticipation of greatly increased demand for suitable building sites.

This is where balance in building our planet pays off. As we increase our population, we must provide suitable housing and prosperity conditions. At the same time, we must never lag in technological research and in the industrial base that will make Almayva the envy of the galaxy. (Let's hope not TOO envious, lest we draw too much attention!)

DAY 145 — Even lay people among the Baliflid are astonished at the secrets revealed with the discovery and deciphering of the Tonklin Diary. While most of the applications

are of little initial use to us, many discoveries could prove valuable in trade. Others most certainly will lead to discoveries more useful to our people. It is, in fact, this latter consideration that has prompted us to begin construction of a second laboratory complex.

DAY 158 — With our new lab just completed, we can accelerate our scientific research greatly. Also of concern is the relative weakness of our orbital defenses. Some of our more pessimistic scientists predict that our present installation could not survive more than one large plasma burst.

News of this assessment leaked to the Baliflid press, who are always more than happy to wring an amusing story out of a situation no matter how they must twist the facts. The resulting near-panic was hysterical to watch, and now public clamor for an orbital shield-building program is sure to eventually encircle Almayiva with a colorful bracelet of orbital shields. We are indeed a peculiar little species!

DAY 173 — Even though some feel our resources could be better directed to more peaceful matters, our leaders still believe it is prudent to continue construction of the orbital shield network. We certainly don't wish to wake up one morning and find ourselves subjugated by some as-yet-unknown species with foul breath and no sense of humor! After our contact with the seemingly peaceful Hanshaks, we all realize that we are far from alone.

A MIGHTY FORTRESS

DAY 183 — One of my young nieces stopped by to see her favorite uncle today. After pulling my chin whiskers and chattering about some of her playmates, she turned suddenly quite serious and asked if we Baliflids would ever travel as do the Hanshaks.

A budding Baliflid leader there, even if I am a biased uncle! I replied in two ways: Humorously I responded that if everybody looks like the Hanshaks after traveling through space, no Baliflid would willingly reach for the stars.

Then, on a more serious note, I told her that there are many paths and many strategies to arrive at one's goals. Our way is to enjoy the rich humor of life, to disarm any enemies through our ancient diplomatic grace, and to build quietly a bulwark that may protect us in times of great galaxy stress.

While others may seek salvation or riches through the starry night, the Baliflids will build an inner ascendancy which may well prove a wiser long-term plan.

On other fronts, our research into superconductivity and environmental encapsulation continues.

Not wanting to trust our entire defense to our orbital shield network, we eventually should be able to construct surface shield installations with the data from the superconductivity research. Although we have no need for colonization techniques, it is thought that this information eventually might help us use some of the less habitable areas of Almaviva.

DAY 188 — Our third orbital shield is in place, and work on the fourth is already under way.

DAY 200 — It has become painfully obvious that our present agricultural infrastructure will be inadequate to fulfill the needs of our burgeoning population. We must make more efficient use of our fertile areas. Research in advanced chemistry

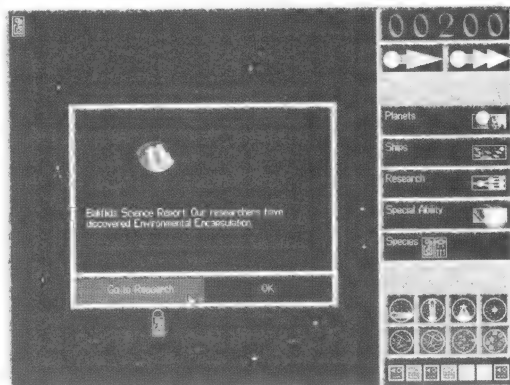


Figure 4-03. Environmental encapsulation technology ultimately will lead to valuable habitat construction capabilities.

will help us do this. (It also would help if we ate less. Ha! Fat chance. Our metabolisms are far too hyper for that.)

DAY 203 — Still we follow a balanced path: Our fourth orbital shield is completed, and our third factory begun.

DAY 228 — So much is going on! In recent days, our third factory has been completed, the transportation tube network

has been expanded, and a third laboratory finished. Now work has started on our first surface shield. While in some ways not as effective as orbital shields, surface shields provide an effective second line of defense.

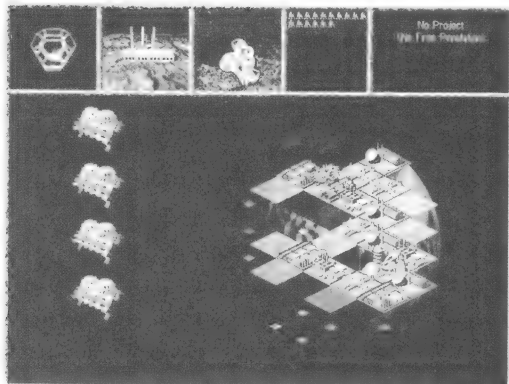


Figure 4-04.
A large number
of orbital shields
will make any
invader think
twice.

DAY 230 — Principles of advanced chemistry have been discovered and interplanetary exploration research begun. While we

still have no interest in exploring other worlds, the technological dividends of interplanetary exploration research are too great to be ignored. Those dividends spill over into other areas that have nothing to do with space travel, but everything to do with building our planetary resources.

THE BEST DEFENSE

DAY 240 — With our interplanetary exploration research bearing fruit, we can turn our attention to investigating spectral analysis. This should provide us initially with basic missile

technology with which we can eventually construct defensive missile systems.

We also hope that a branch of this research might lead to the manipulation of light waves. If this could be achieved, then some sort of cloaking shield might be devised so that we could simply play hide-and-seek with potential enemies.

DAY 248 — Once again public outcry for more defense has been quelled, if only temporarily, by the completion of our first surface shield installation.

To avoid a similar public outcry over dwindling food supplies, we have started construction on an artificial hydroponifer, a result of our research in advanced chemistry. The hydroponifer is far more productive than the simple agriplots.

DAY 264 — Now that we have defensive missile technology in our grasp, we begin an investigation into spacetime surfing, a somewhat arcane branch of physics that only recently has gained favor from some of the more progressive scientists in our labs.

There are many who insist our purely defensive orbital shields will be no match for a truly advanced invader. Our powers of persuasion may be great, they say, but a few missiles might add weight to an argument. With some reluctance, I agree with this observation.

DAY 268 — The first artificial hydroponifer is up and running, and seems to be the answer to our problems of food supply. To celebrate, we held a massive planetwide feast!



Figure 4-05. Although space exploration is not a Baliflid goal, related research is useful for trading with others.

Still, the agronomists are among the most conservative of all scientists and insist that we not give up our agriplots before the hydroponifer technology has proven itself completely. A second installation should remove all doubt.

DAY 282 — Spacetime surfing has been discovered and power conversion research begun. Oddly enough, our scientists have said that we now possess all the technology required to construct a spaceship. Well, we also have all the technology we need to construct a bomb the size of our planet, but we don't use it!

The discovery of spacetime surfing has caused an old and often vitriolic argument to resurface—our decision not to pursue interplanetary and interstellar exploration. Now that we have all the technology needed for constructing and navigating a starship, some Baliflids believe we should take our place among the starfaring races.

Perhaps they need some sort of reminder that the universe is not a hospitable place, and that we Baliflids are perhaps not aggressive enough to thrive beyond the warm confines of Al maviva. No matter what, we must look to building our defenses so we will carry on with this line of research.

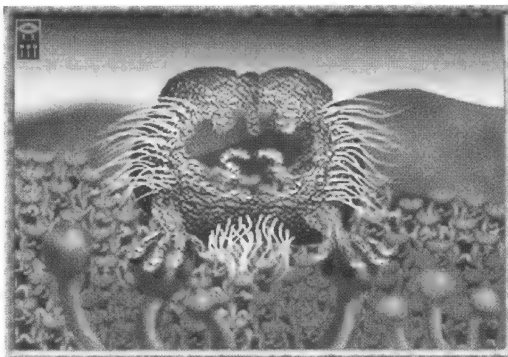
DAY 302 — In recent days, our second artificial hydroponifer has been completed, our scientists have discovered power conversion, and research has begun on gravity control.

Completion of power conversion research will enable us to build a more effective orbital defense system, when the resources can be allotted for such a project. There is so much being discovered almost on a daily basis that we scarcely have time to play and to relax anymore—at least no more than six or seven days out of ten!

THE HANSHAKS DELIVER!

DAY 351 — Ah! Our diplomatic control begins to pay off! The Hanshaks have agreed to provide us with research data on advanced interferometry.

Although they still think talk of an alliance is premature, the Hanshaks do seem predisposed to share with us their research. The interferometry is a welcome surprise since our scientists had estimated several hundred days' work would be involved in investigating this rather complex field. This new information, added to what we've already been able to discover, should put cloaking technology into our hands in no time.



DAY 414 — While I am pleased to say that gravity control has been discovered, I am even happier to report that cloaking research has begun.

A growing segment of the Baliflid population grows uneasy with the aggressive stance we've chosen to take on planetary defense. These citizens greeted news of our scientists' initial foray into cloaking technology research with great acclaim.

While we do not plan to hide from the universe, short-term cloaking ability could be invaluable while we work our long-range diplomatic powers on any would-be aggressors.

DAY 569 — Never cling to outmoded technology when a better way presents itself. The great experiment with hydroponifer technology is an unqualified success, allowing us to abandon our agriplots. Eventually, we will replace all agriplots with artificial hydroponifers.

Figure 4-06. Of all the species the Baliflids encounter, the Hanshaks will prove to be the most reliable allies.

FIRST ALLIANCE

DAY 751 — The Hanshaks are proving themselves to be willing technology swappers. They have agreed to provide us with research on hyperlogic. We've decided to forge an alliance with these harmony-loving creatures. They have proven themselves worthy of our trust.

We've also begun to abandon our laboratories and to focus on the much more productive research campus facilities. The new campus will nearly double the productivity of our research.

All Almaviva turned out for the festivities marking the beginning of the

alliance between the Baliflids and the Hanshaks. Well, almost all. We did keep a couple of construction units hard at work on the research campus.

DAY 783 — While diplomacy is a species predisposition deep in the genetic structure of all Baliflids, we realize that our natural talents may yet be enhanced further.

Also, this special ability of ours is primarily defensive in nature, rising to occasion only when we are threatened. But diplomacy, we have come to see from our dealings with the Hanshaks, can be proactive, as well. Perhaps we also could encourage other species to visit us, do business with us, and join with us in an alliance.

Similar to economics, the research topic of diplomatics is a vague science at best. But that is where we shall put new efforts. Anything we can learn from this research could prove useful. It may even be that some of this research will help us in

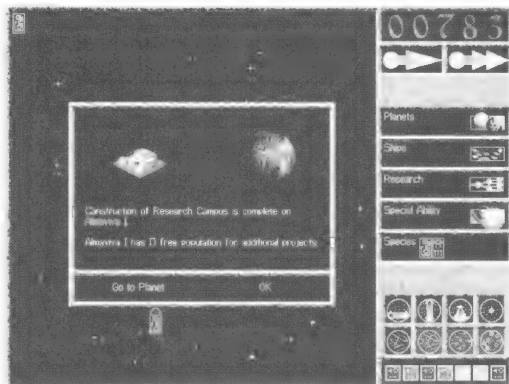


Figure 4-07.

A research campus will speed discoveries faster than the less productive laboratories.

our relations with one another, although I am pleased to say that our great efforts have not reduced our unity or our sense of frivolity.

DAY 909 — Our efforts in the field of diplomatics have proven to be a valid course sooner than we expected. The Chronomyst have arrived.

They are a strange race, almost machine-like in their inexorable logic, and yet a species we can deal with. They are perhaps more wary of us than our diminutive size and innate charm normally would warrant. We are content to wait for the right time to open a more productive dialogue.

DAY 951 — Still further contacts with the delightful Hanshaks. They are providing research data for momentum deconservation, light bending, and gravimetrics. They like us! They really like us! (With a little help from our special ability . . .) Acquiring this knowledge by ourselves would take many, many cycles.

We also have begun research into strong force weakening.

ADVANCED FUN TECHNIQUES

DAY 952 — Strong force weakening has been discovered, a weapon we hope we'll never be forced to use. It can defuse a powerful aggressor; but to employ it means our diplomacy has failed.

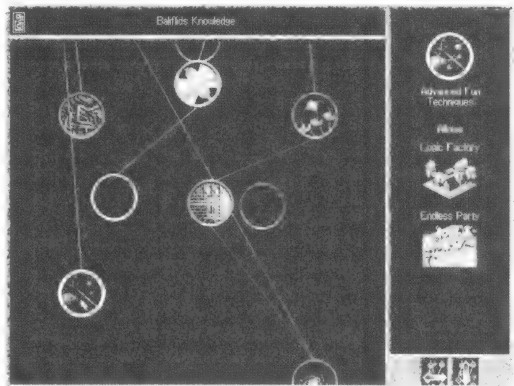


Figure 4-08. Although advanced fun techniques sounds frivolous, it increases a species' productivity.

Finally, a research topic that every Baliflid can support without one iota of doubt: advanced fun techniques. If there's one thing we know better than diplomacy, it's how to have fun. And so, research in advanced techniques gladdens the heart of every Baliflid. It also promises to increase by several orders of magnitude the productivity of our citizens.

There's still much debate as to the usefulness of certain branches of research; and I must admit that, upon reflection, I

personally fail to see any real use for the weapons resulting from the strong force weakening. Much more important will be our foray into the mysteries of advanced fun techniques, a frivolously named area of study that promises to increase by several orders of magnitude Baliflid productivity in all sectors. It is an ambitious undertaking, with most scientists esti-



Figure 4-09.

The nomadic Swaparamans are exiles from their own home world, making them cautious negotiators.

imating it will require as much time to complete as almost all our research efforts up to this point.

DAY 984 — With the completion of our first research campus, we have declared a moratorium on building projects. We have come so far so quickly, and now we must consolidate our achievements and give serious consideration to where progress' path leads from here. We will institute, however, a regimen of alien hospitality, aimed at encouraging visits by other species we have yet to make contact with.

DAY 1021 — The alien hospitality approach we've adopted has paid off with the arrival of the intriguing Swaparamans, a friendly but extremely wary species of cosmic nomads. Perhaps we would be as wary as the Swaparamans, had we been driven

forever from our home world. Now that I think of it, we ARE as wary!

With their extensive space travel experience, the Swaparamans almost certainly possess knowledge of far-flung star systems and civilizations. There will be no alliance for now, but we shall continue our dialogue with them.

DAY 1101 — We continue to have regular contact with the Hanshaks. They have provided research data for mass phasing, but they have yet to supply any substantive star lane information.

For far-traveling traders the Hanshaks seem to have little knowledge of the star lanes. And they're reticent to share whatever they have with us. Still, we continue to press them, gently, each time they visit, in the hope that they'll eventually take us into their confidence. While we don't need the star lane information for our own ships, it could prove valuable as a trade item with other species.

STAR LANE SECRETS

DAY 1201 — At last! The Hanshaks have offered us substantial star lane information as well as advanced exploration techniques.

DAY 1251 — Diplomacy pays great dividends when pursued consistently over long periods.

We had expected advanced fun research to take another four hundred cycles or so, but with yet another gift of knowledge from the Hanshaks, we can leapfrog ahead immediately.

Upon receiving this new data, we have made the extraordinary decision of rescinding the moratorium on construction so that we can build a Logic Factory, a research complex that specializes in providing entertainment and happiness for all Baliflids.

The increase in efficiency and productivity will, I believe, more than make up for the disruption in our overall schedule.

Day 1501 — Much time has passed, and we continue to grow and prosper. We have not been dragged into any conflicts, nor do we have to worry that our presence will be a threat to other worlds. Truly, our strategy appears to be paying off. We are happy and frivolous (and we work diligently!).

Our relationship with the Hanshaks continues to be a good one. Most recently, they have provided star lane information in addition to research data for positron guidance and gravimetric combustion.

We recently have begun work on our first industrial megafacility.

DAY 1512 — We have heard tales and rumors of the great planet protectors, the Ungooma. But, upon meeting them, we wondered how they ever ventured forth into space; they seemed so frightened and anxious. Our appearance and behavior in this universe is as nonthreatening as could be, so the Ungooma's reticence struck us as odd.

There are many among us who feel they may perhaps be hiding their true intent behind a mask of timidity. Regardless, we look upon this meeting as merely an introduction. It may take many cycles before the Ungooma trust us enough to enter into even the most superficial of relationships. That is the nature of diplomacy—patience and consistency.

RESEARCH VS. DIPLOMACY

DAY 1538 — It has now been more than 1500 days since the start of our great infrastructural Ascendancy, and it has been as instructive as it has been exciting. As we complete one industrial megafacility and launch efforts to construct a sec-

and one, we can see just how planetary resources can be maximized over time.

While other species that we have met seem either suspicious or bemused by our total lack of space travel ability, I note here that we have managed to avoid all conflict while learning a tremendous amount of technical information by research and diplomacy.

For others, the path may be through the stars; for us, the path is our own home.

DAY 1551 — Still further contact with the Hanshaks. Now they are providing star lane knowledge plus research data for molecular explosives.

DAY 1576 — Our third industrial megafacility has been completed, and we continue to solidify Almaviva.

DAY 1701 — May the stars bless the wonderful Hanshaks! Their appearance may cause Baliflid children to laugh, but these star travelers continue to be the best of allies. They continue to provide star lane knowledge as well as research data for subatomics, plasmatics, planetary replenishment, large-scale construction, momentum reflection, and coherent photonics.

Most recently, the Hanshaks brought us an extremely valuable prize—knowledge of the science of terraforming. So much of Almaviva serves as little more than the foundation for our tube system. Using terraforming techniques, we shall be able to reclaim all unproductive land. In no time, every square centimeter of heretofore useless land will be available for our use. What fun!

DAY 1708 — As our surface area grows and our construction projects are once again running at full bore, we acknowledge the need to increase our population. Employing the new habitat technology and aided by the research in planetary replacement, we will make all of Almaviva a paradise.

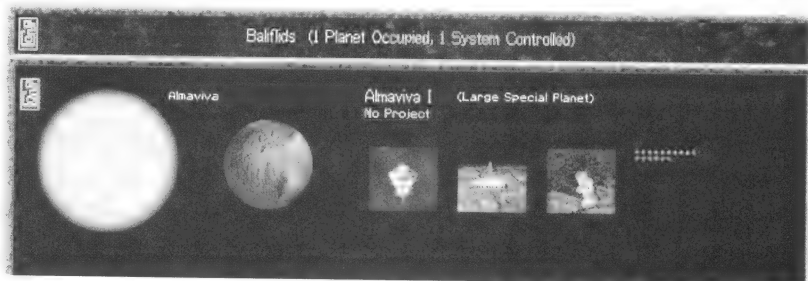


Figure 4-10.
Almaviva has become a communications nexus for other species as well as a planetary showplace.

DAY 1743 — Our first Metroplex, a wonderful multipurpose facility that will draw Baliflids by the thousands, is under way. As our planet grows and matures, our planetary structures are taking on a more complex and extended function. Had we traveled to the stars, would we be as safe? Would we have such a wonderful home planet? Or would we be in the spotlight of every aggressive malcontent in the universe?

DAY 1768 — Our first Metroplex has been completed and our second habitat begun.

We have requested information from the Chronomyst and even suggested an alliance. But we have been turned down on both counts. Patience . . . and a warm smile.

DAY 1834 — Our planetary infrastructure is quite marvelous now. The first Logic Factory has been completed and work on an orbital cloaker has begun. But while these planetary items are a wonderful aspect of our growth, our central efforts now are to become allies with all species that we meet. This is not an easy task; but for a people as joyous and full of life as the Baliflids, it is a path with heart.

DAY 1901 — Further contact with Hanshaks resulted in more star lane knowledge and research data on hyperradiation and energy redirection.

DAY 1951 — The Hanshaks continue to come through with information on star lanes, matter duplication, the Murgatroyd hypothesis, scientific sorcery, star lane anatomy, and super-string compression. Bless their beating hearts—if they have any! (I'm not sure of the details of Hanshak anatomy, except that I don't care to know any more about it.)

A SWAP ALLIANCE

DAY 2437 — Another great day in Baliflid history! The Swaparamans are providing research data for ecosphere phase control. But, more importantly, they also have proposed an alliance.

We accept, and immediately the Ungooma contact us, requesting an alliance! So it is with diplomacy. Sow the seeds, be patient and nurture their growth, and reap the benefits.

Why the Ungooma are so suddenly interested in an alliance is not yet within our grasp. While generally conservative, they may have come to trust us through their observations over these many days. They have provided new star lane knowledge, plus much research data for megagraph theory, hypergeometry, and hyperdrive technology.

News of the dual alliance forged with the Swaparamans and the Ungooma sends the people of Almaviva into the streets in celebration. With this historic achievement, we stand on the brink of complete galactic peace and prosperity. Even though the Chronomyst still resist alliance, we believe that our dream of

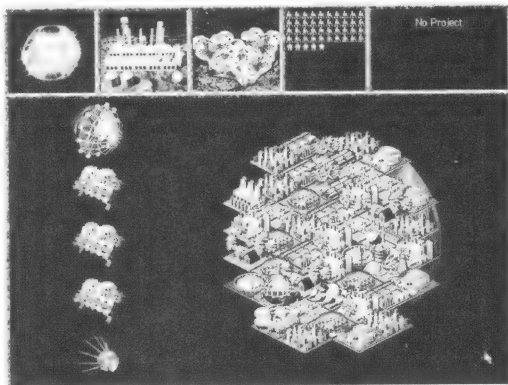


Figure 4-11. Development of planetary resources should never cease!

security and prosperity will yet be achieved . . . and without any of us having left Almayiva!

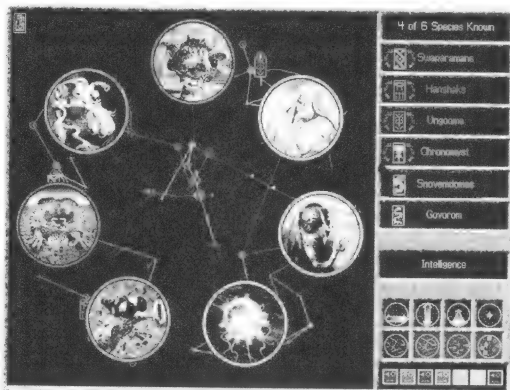


Figure 4-12. Solid relations with all of the Baliflid's neighbors are a rare achievement in this universe . . .

aware of our continual overtures to the Chronomyst for an alliance, are only trying to test us, to protect the special relationship we have with them.

A RESEARCH CUL-DE-SAC

DAY 2656 — Further felicitous contact with the Ungooma. They provide star lane knowledge plus research data for gravity flow control.

DAY 3423 — The days go by with alacrity, and our happy planet knows peace, prosperity, and alliances. Our scientific research appears to have come to an impasse.

There's no way to tell for certain, but all indications are that, without some fortuitous discovery of some as yet unknown fundamental physical law, we have reached a research cul-de-sac; or, at best, a bridge awaiting some critical part for future construction.

DAY 2601 — The Han-shaks ask for a meeting to discuss several points concerning our alliances with other species. We summarily table the discussion.

We are somewhat concerned that the Han-shaks, after so many cycles devoid of any controversy, would broach the subject of breaking an alliance. It is all too possible that the Han-shaks,

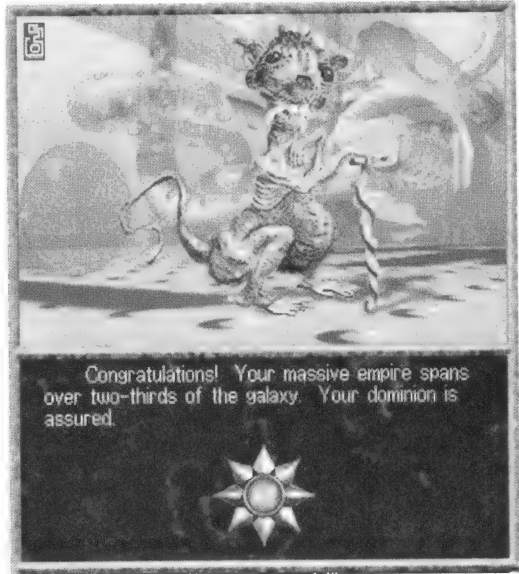
We shall turn all our considerable efforts toward bringing the Chronomyst to the negotiating table.

DAY 3571 — Break-through! The Chronomyst seek an alliance with us! And we gladly accept.

The Chronomyst were the last holdouts among those species that we know, or have heard of, in our search for a galaxywide alliance. Although we have been told that there is yet a seventh species on the far side of this galaxy, we have seen no direct sign of them in more than 3500 days.

If they do exist, then perhaps some day we shall have a chance to forge an alliance with them as well.

As this day draws to an end, I am certain that the Baliflid people can look forward to many cycles of peace and prosperity. Our ascendancy is complete. What is more, we never had to leave our beloved planet to reach this state of ecstasy!



Congratulations! Your massive empire spans over two-thirds of the galaxy. Your dominion is assured.

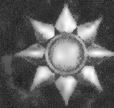
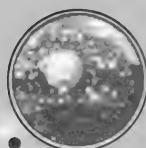


Figure 4-13.
... and a determining factor in a species' ultimate success.



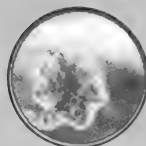
The Fludentri



The Mebes



The Chamachies



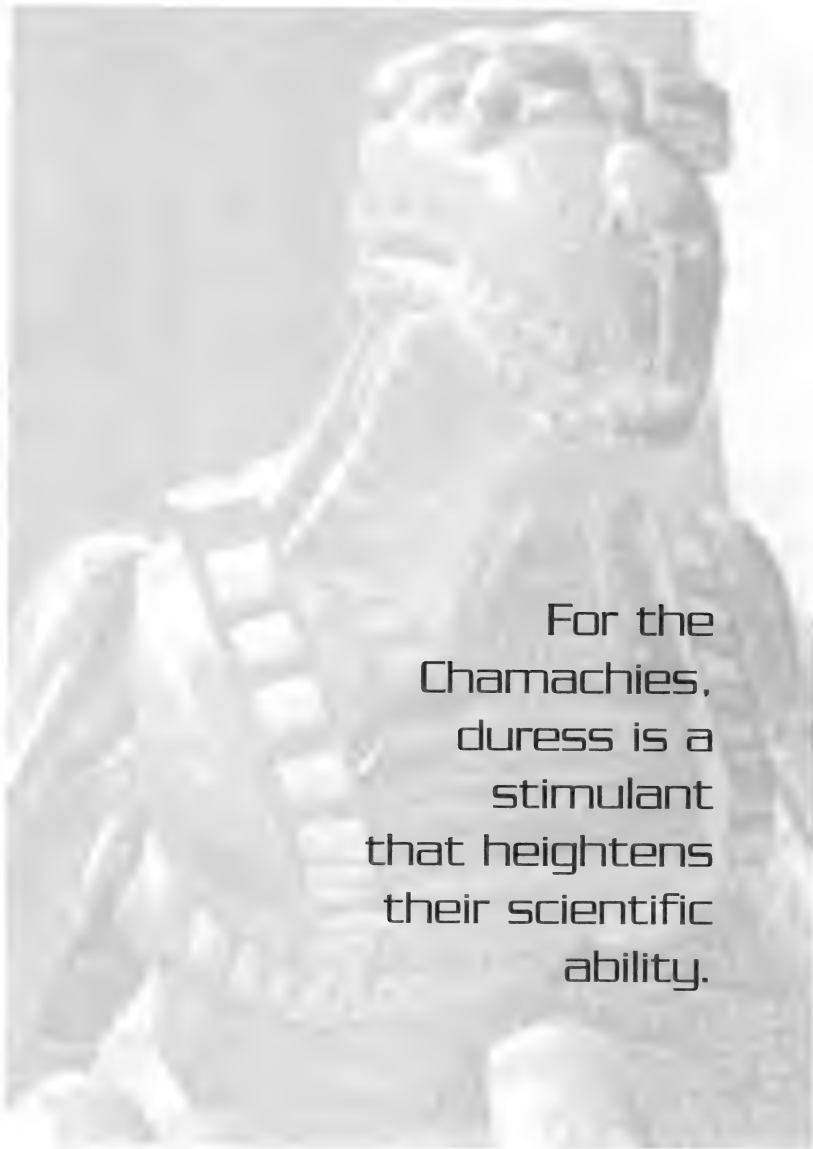
The Nimbulooids



CHAPTER 5

DEATH FROM ABOVE:

IRONSNOUT OF THE CHAMACHIES



For the
Chamachies,
duress is a
stimulant
that heightens
their scientific
ability.

Welcome to the Intergalactic Encyclopedia, 231,569 A.D. edition. The research topic you have chosen is:

Ironsnout, Brightscale; Exalted Overadmiral, Chamachie Fleet. *See also* Chamachie Empire *and* Discordia, Battle of.

The subtopic commentary you have chosen is a voice holo of:

Tailbiter, Chainmail; Subadmiral (Ret.), Chamachie Fleet.

RESEARCH PRÉCIS ENTRY

Brightscale Ironsnout was born into a prosperous extended nest on the Chamachie home world of Millitrin in the year -19. (Standard annualized pre-day time dating.)

In a long and brilliant military career, Ironsnout led Chamachie war fleets successfully against the Mebe empire and, subsequently, the Fludentri. Honored by the Chamachies and recognized as a brilliant tactician and ship designer, Ironsnout was recognized on the short list of great galactic conquerors.

COMMENTARY OF SUBADMIRAL CHAINMAIL TAILBITER, CHAMACHIE FLEET [RET.]

I had the distinct honor, for many cycles, of serving under Exalted Overadmiral Ironsnout in the Chamachie fleet. He was,

in my opinion, the single most effective leader that Chamachie society and its military structure has ever produced. And since his death, I have made a study of not only the man but also his strategies before and during the famous Mebe campaigns and the Fludentri uprising. His career represents an excellent overview of extended campaign strategies across star systems.

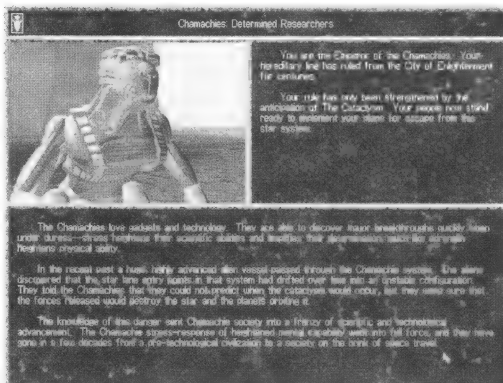


Figure S-01.
The cataclysm predicted for their star system forced the Chamachie to seek a new home among the stars.

To begin Ironsnout's story, you must understand that at the time of Ironsnout's youth, the most prestigious occupations in Chamachie society were engineer and soldier. Apparently, Ironsnout had only a middling aptitude for mathematics, but he had a considerable gift for picking and winning fights with his nestling companions.

So, naturally, and with his parents' blessing, he gravitated toward a military career. He enlisted as a cadet as soon as he came of age, shot to the head of his class, graduated with honors, and immediately volunteered for the Elite Forces. He rose quickly to become second-in-command of the legendary Salamanders of Death, which is where I first came to know him.

THE BIG NEWS

It was about the time of what historians now call the Big News: the mysterious alien contact that warned us of the coming cataclysm. To this day, we don't know who the aliens were or where they were headed when they made contact with us.

We just know that on that morning of what we now call Day One, every communication device on the planet was suddenly blocked by the aliens' signal. The message they imparted in a planetwide broadcast was stunning: According to the aliens' research, the star lane matrix surrounding Millitrin was gradually becoming unstable. At some undefinable date in the future, the entropic process would reach critical mass, causing that region of space to go nova, destroying the entire Millitrin system (along with anything else within a few parsecs' radius).

INTERSTELLAR TECHNOLOGY

Our Chamachie scientists understandably were skeptical. Like every other species on record, our society has had its share of apocalyptic cranks who traffic in end-of-the-world predictions. But when the alien data was verified the numbers added up. The cataclysm would happen, sooner or later. Our only hope was to vacate the neighborhood before it exploded around us.

Up to this time, space travel had been the province of fiction writers and poets. Since we reproduce relatively slowly and used to live on a big planet, we didn't have any psychological drive to explore other worlds.

But, after the Big News, you can bet that priorities shifted in a hurry. Engineering projects that previously had been focused mainly on developing Millitrin's abundant natural resources and on improving our quality of life were reorganized toward a single, urgent goal: the development of interstellar travel. For us, the equation was stark and simple: Colonize or die.

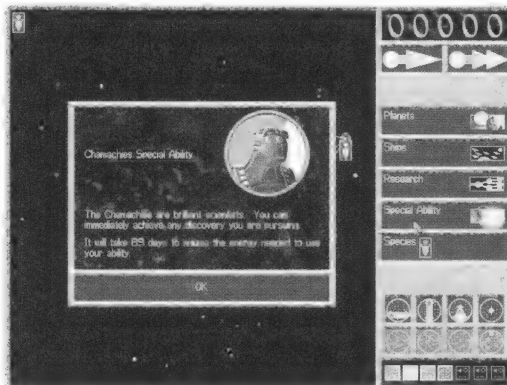


Figure 5-02.
Chamachie
scientists
uncover
research
results almost
instantly.

Ironsnot immediately took up the challenge and transferred into the fledgling Space Fleet. Since his strengths were those of a leader and a strategist, not those of a technician, he helped organize a ruthlessly disciplined training regimen for future space farers. While our engineers concentrated on developing interstellar technology, Ironsnot prepared the fleet's crews and their officers for their daunting but heroic undertaking.

As you know, if there's one thing we Chamachie can do well, it's research. And we can do it fast. Well, you've never seen anything like the speed with which we employed this special ability toward developing research facilities and our industrial base.

TONKLIN DULLCLAW

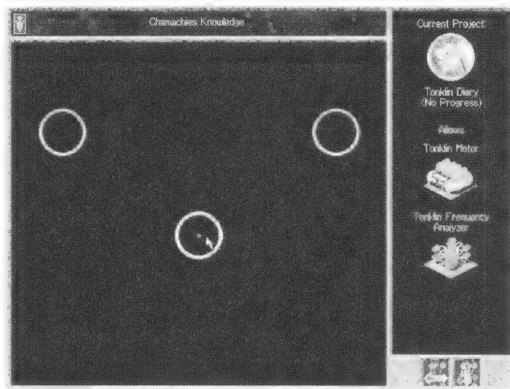
Anybody who's read history at all knows the name of Tonklin Dullclaw. But at the start of our space efforts, Dullclaw was just an obscure metaphysician and poet. I remember him as a small, unimposing Chamachie who had been tormented in school with the nickname *Geek Crest*.

Well, as it turned out, inside those homely scales resided a brilliant theoretical mind. Apart from publishing essays such as "The Forepaws of the Ineffable" and "Dewlaps of Destiny," Dullclaw had been keeping private journals filled with remarkable scientific designs and theories.

When he timidly presented these writings as his personal contribution to the cause, he did so with such insecurity that no

one initially took much notice. When one of the research nests actually got around to examining what became known as the Tonklin Diaries, they were flabbergasted at the brilliance and far-reaching implications of his designs. The little geek was a genius!

The Tonklin motors, the first interplanetary propulsion system, were constructed based on Dullclaw's notes. Though slow and weak, they laid the foundation for the entire Chamachie expansion.



PROMISING COMMODORE IRONSNOUT

Our research was advancing exponentially once the coordinated program got into full swing. On Day 334, the first Chamachie starship was launched—a medium-sized, unarmed vessel crammed with four colony modules—with the promising Commodore Ironsnout at the helm!

In the next two hundred-odd days, Ironsnout's ship explored three systems and planted colonies on four small- to medium-sized worlds. Near the end of its maiden voyage, the ship's sensors suddenly picked up a strange spacecraft. Responding to the ship's hail, Ironsnout found himself staring at his first Mebe, a creature he later described as resembling "a huge, transparent, sparkling balloon."

The initial diplomatic exchanges were polite and inconsequential. Commodore Ironsnout was not about to be impressed by a transparent balloon, and he took an immediate dislike to them.

Figure 5-03.

Tonklin Dullclaw's genius led the Chamachies toward their first spacecraft technology.

Of course, the idea that the Mebes might not be entirely benevolent in their dealings was suspected from the first, but it wasn't confirmed until the eight-hundredth day: We made a test offer to exchange research.

Fleet intelligence, however, using newly developed techniques, already had a reasonably accurate estimate of the Mebes' technological status. The Mebes responded, in effect, that such an exchange would be worthless, as their own research was so far in advance of ours.

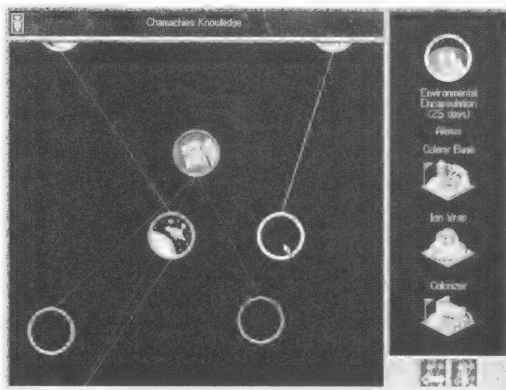


Figure 5-04.

Research work on environmental encapsulation resulted in colony base technology.

Well, the Mebes didn't fool anybody, least of all Ironsnout. You'll find an entry in Ironsnout's memoirs that puts it well: "They kept trying to bluff us, but it's very hard to pull off a convincing bluff when you have no facial expressions whatsoever."

GALACTIC LOSERS

Meanwhile, we had contact from the Nimbulooids, a species Ironsnout characterized as "galactic losers." Ironsnout just didn't like foreigners!

For an extended period, Nimbulooid ships shadowed Chamachie units through several systems, but their presence was regarded as a nuisance rather than a threat. Ironsnout himself once was followed by three Nimbulooid ships through several star lanes, but they didn't make any hostile moves.

Ironsnout told me later, "All we had for armament were short-range missiles and popgun cannons. They could have overwhelmed us easily, but all they did was bluster. I came away from

the experience convinced that the Nimbuloïds posed no real threat to our expansion—events proved me right.”

A TACTICAL INNOVATOR

Ironsnout already was becoming known as a tactical innovator. Rather than laboriously retracing star lanes back to the nearest docking facility, he commanded ships that had expended their colonizer modules to be stationed near the openings of strategic star lanes, where they were able to provide timely intelligence about the comings and goings of various alien ships. Once a new and more advanced ship was launched, the obsolescent patrol craft were abandoned to make room for faster, stronger replacements.

Suddenly, and for no apparent reason, the Mebes declared war on us. “It wasn’t much of a war,” Ironsnout once remarked to several of his officers. “There was one engagement in which two of their medium-class ships bush-whacked one of ours. After a determined stand—my well-trained crews were fiercely motivated by the looming threat of extinction—our ship was destroyed. But so was one of theirs, and the other was so badly hammered that it limped away “in the red.”

Just as mysteriously as they had declared war, the Mebes suddenly asked for an armistice. To this day, no Chamachie historian has been able to figure out why, and the entire event remains an enigma.

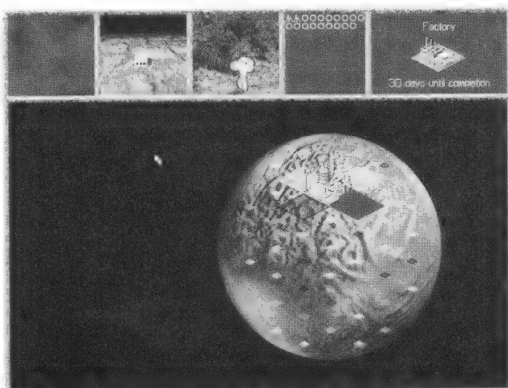


Figure 5-05.
New Chamachie colonies are the first steps toward a massive relocation.

It *did*, however, have a profound effect on our priorities and on Ironsnout's attitude. Until then, our galaxy had seemed a relatively peaceful place. But since we Chamachies are somewhat warlike and suspicious by nature, this litany of events made us adopt a new and more belligerent attitude. Our engineers refocused their formidable powers of research on offensive and defensive weaponry.

TAKING ON THE GASBAGS

The third and, as it turned out, last alien species made contact on Day 1082. The Fludentri were odd creatures, resembling big, droopy pseudopods. During their first diplomatic exchanges with us, they gave an impression of diffidence

and insecurity, even non-chalance. At first, we didn't take them seriously. But I do remember Ironsnout telling me he thought that sooner or later we were going to have to kick their droopy pods back to the other end of the galaxy.

Sure enough, they showed their true colors when they launched a fairly combat-intensive war with the Nimbuloids. Ironsnout,

who was by this time a fleet admiral and my direct commander, recommended that the Chamachie not get involved.

"Let them duke it out with each other," he advised the council. "The more they pummel each other, the easier it makes things for us."

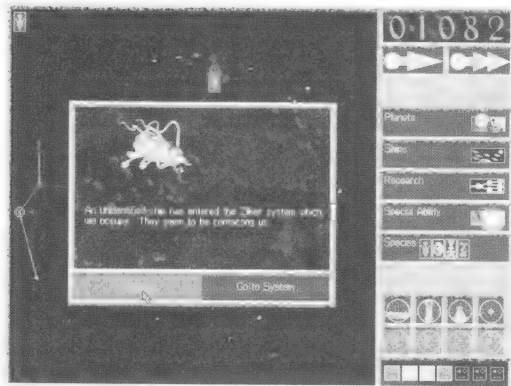


Figure 5-06.

First contact with the Fludentri didn't foreshadow the conflict that lay ahead.

Meanwhile, our expansion remained steady and methodical. In a number of systems, planets were now colonized by two, even three different species. As Ironsnout remarked to me one day as we studied a star map: "The neighborhood's getting crowded, and sooner or later something's going to blow."

He was right again. Shortly after the Fludentri-Nimbuloid war had ended in a draw, those gasbag Nimbuloids declared war on us and launched several multiship invasions.

Well, Ironsnout was ready. Our ships were up-to-date and our crews primed for action. What's more, Ironsnout had made sure that each Chamachie planet was well defended with shields and orbital missiles.

After several indecisive skirmishes, two Chamachie medium-class ships, supported by the orbital defenses of a nearby colony, took on four attacking Nimbuloid medium-class ships. When the smoke cleared, three Nimbuloid ships had been vaporized while only one Chamachie vessel had fallen.

"I told you they ain't so tough," Ironsnout barked at me after the battle.

And, indeed, not long after this engagement, the Nimbuloids requested an armistice with us.

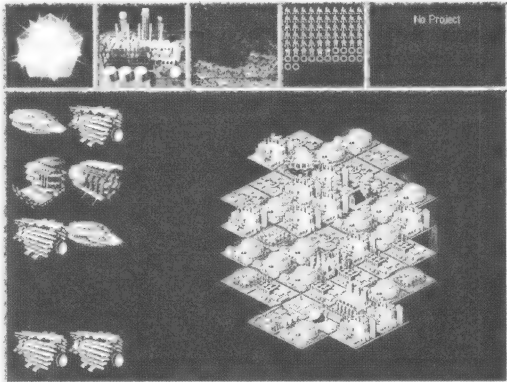


Figure 5-07. Well-protected Chamachie planets were a cornerstone of Ironsnout's strategy.

MEBE AGGRESSION

The Mebes proved to be a tougher opponent.

We know now that the Mebes' intelligence estimates rated combined Chamachie planetary and fleet strengths as roughly

comparable to their own. But they weren't aware that Chamachie research was significantly more advanced than theirs! They decided on an all-out campaign.

In terms of numbers, the two sides were about equal. If the Chamachies possessed an advantage, it was in the configuration of their starships.

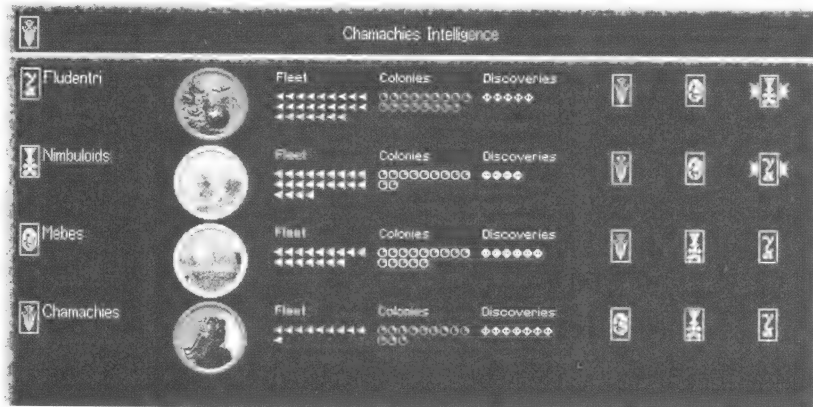
Ironsnout had revamped the construction and design program. He had observed that a ship with four weapons was less effective than a ship with two, provided that the ship had more energy than its opponents. Without sufficient energy, the most heavily armed ship would sooner or later be at the mercy of an opponent who could continue to fire, even a few rounds, without being fired at in return. Now, this was just pure brilliance!

To that end, Ironsnout's designs sacrificed both speed and firepower in favor of energy and armor. In many battles, our ships not only withstood bombardment better than the enemies' ships, but we were able to continue firing after the enemy craft had become too drained of power to use their weapons—no matter how many or how advanced.

Although our ships could be described as slow, when compared to those of our adversaries, ours were more durable and packed with more energy resources.

Figure 5-08.

Intelligence reports are sometimes misleading, but the Chamachies and Mebes were running neck-and-neck for quite awhile.



REPLENISHERS AND ORBITAL DOCKS

Ironsnout also made certain that every new Chamachie ship was equipped with a replenisher, a device that could restore enough firing power to a ship's weapons systems even if the ship's main power plant had been depleted. In many battles, those extra few shots made a crucial difference.

In addition to periodically upgrading orbital defenses, Ironsnout made sure that each Chamachie system containing an adequately sized planet also had a shipyard, and that every sufficiently developed planet had an orbital dock. Our damaged or depleted ships could be repaired and go back into action with the shortest possible turnaround time.

VULNERABLE MILLITRIN

But even Ironsnout made mistakes. The biggest one was to neglect the defenses of Millitrin, our home world. His reasoning was that the predicted cataclysm could happen at any time, and when it did, every planet in the system would be turned into space dust.

But as time went by, it seemed increasingly probable to us that the dreaded event would happen later rather than sooner. By the time this became evident, the Mebes already had established two colonies in the Millitrin system. Biding their time until our fleet was occupied elsewhere, they eventually pounced, easily overwhelming the planet's neglected defenses. The effect on Chamachie morale was devastating, and Ironsnout never fully forgave himself for the loss.

Ironsnout vowed to recapture our home system, but it would require a long and costly campaign to do so, and while it raged, his long-range strategic plans were put on hold.

As I said, it's apparent from the tone of his memoirs and comments he later made to me, that he found the experience bitter and humiliating. When news came of Millitrin's capture by

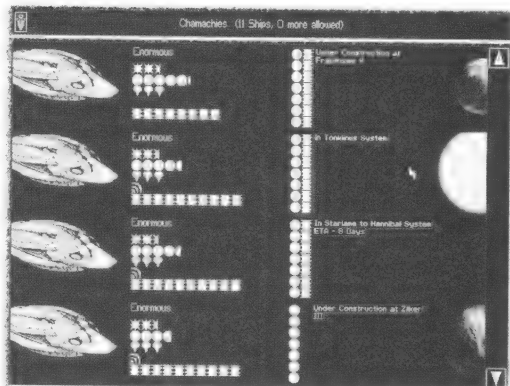
the Mebes, he offered his resignation. Fortunately for the future of our species, it was rejected.

For all their “sparkling balloon” appearance, the Mebes turned out to be stubborn on the defense and audacious on the attack. Ironsnout’s basic strategy was based on the concept that, whenever possible, it was better to capture a Mebe planet than to engage in fleet-to-fleet combat. He hoped to gradually chip away at the infrastructure that supported the Mebe warmachine.

He turned to me one day and said, almost thinking out loud: “If we take enough of their planets,

we’ll sooner or later take a whole system. When we do that, they lose a brand-new ship without us having to fire a shot at it.”

Figure 5-09.
A Chamachie ship's screen shows no shortage of enormous-class ships in operation.



STAR LANE STRATEGY

Ironsnout’s grand strategy was based on intensive study of the star lane maps. Millitrin was centrally located in a tight cluster of systems, far off in the northeast quadrant of the galaxy. Since the other nearby systems naturally had been the first to be colonized by the Chamachie, they were by now well developed and possessed formidable defenses, several shipyards, and at least a half-dozen orbital docks.

Given the available resources, it didn’t take long for Ironsnout to mass a fairly powerful fleet. Repeated incursions by

the Mebes were repelled by patrol ships and long-range orbital whoppers.

Also, our sector was so remote from the Mebe home world—far across the galaxy, in the southwest quadrant—that it was difficult for the Mebes to mass a large fleet there. By the time they had one en route, Ironsnout was ready to strike.

During the months he had been preparing to avenge the capture of his home, Ironsnout had formulated a grand strategy. Despite occasional setbacks and several major defeats, he never subsequently deviated from it.

And this was the heart of it: After capturing the Millitrin system, the Mebes had fanned out in a radius, grabbing a half-dozen scattered planets. In order to secure our flanks and rear, Ironsnout's first move was to fall upon these outposts in massive force and in quick succession. Planet after planet fell to our fleet.

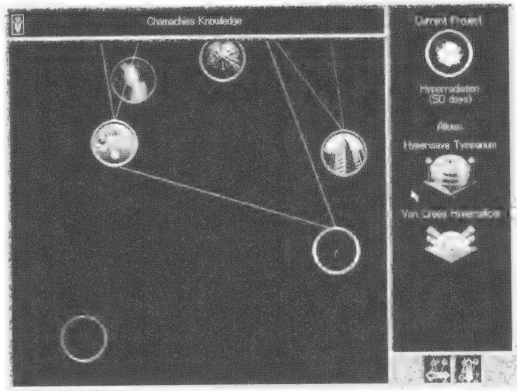


Figure 5-10. While military campaigns progress, super-fast research continues on Chamachie planets.

RETAKING MILLITRIN

Once this initial phase had been accomplished, we then moved against the Millitrin system itself. By that time, the Mebes knew we were coming and threw everything they had into the battle. One planet in the Millitrin system changed hands four times before Ironsnout finally wrested permanent control. The home world itself fell last. Its defenses were considered impregnable by Mebe commanders and, indeed, our forces suffered heavy casualties.

But our line of communications was many light-years shorter than the enemy's, and as fast as we lost ships, we replaced them. During the prolonged siege required to subdue Millitrin's defenses, the heavy armor and beefed-up power supply of our ships really paid off, enabling us to remain on station and

firing long after more balanced ship designs would have been compelled to retire.

Once Millitrin fell, that entire quadrant was secure: a tight, well-defended base for further operations. Ironsnout planned a two-pronged advance. The main fleet would attack straight down the axis of the original Mebe advance—a line that stretched east to the other side of the galaxy,

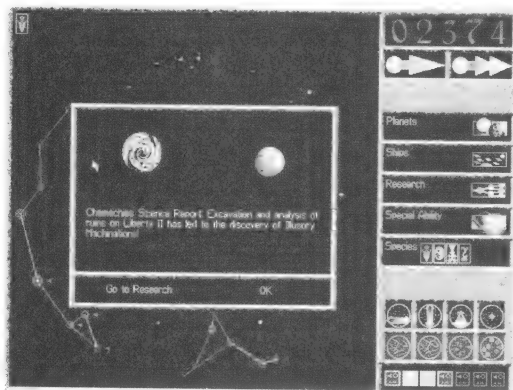


Figure 5-11.
Scouring the galaxy for new homes means discovering valuable alien artifacts.

then curved south toward the Mebes' home system.

As we advanced, small but powerful detachments—well supplied with colonizer modules—would thrust north and north-west through uncharted star lanes, establishing control of any unoccupied system they discovered. Each new system that fell under Chamachie control, of course, would add another potential ship to the fleet.

PLANETARY ASSAULTS

For planetary assaults, Ironsnout developed a new tactic.

In systems where the Mebe worlds were close enough to offer mutually supporting whopper fire, he used the following formula: Three or four of our ships would besiege the target world; one each would attack the supporting planets, and several would

be kept in reserve, near the star lane from which we had emerged. The single ships would draw the fire of the supporting planets, and, due to their heavy armor, could do so for quite a while.

When such a ship sustained enough damage to go “into the red,” it was withdrawn, and a fresh reserve ship was dispatched to replace it. Once Ironsnout had captured the target planet, our ships regrouped and repeated the process until the entire system was subdued. There were losses, of course—and there were always surviving ships that needed extensive repair—but relative to the results, Ironsnout’s tactics kept our casualties remarkably light.

The advance was slow, methodical, and fiercely contested at every stage. Once a system on the main axis was captured, Ironsnout always took time to develop strong defenses, shipyards, and orbital docks to safeguard our rear. This also guaranteed that the momentum of our campaign could be sustained.

We continued, battle by battle, to move east. During the period of Days 1840–1950, for instance, our empire increased from eighteen to twenty-five planets, and three new systems contributed to the growing size of the fleet. And just as steadily, the Mebes’ economic base began to shrink.

Our exploration detachments, branching out from the main axis of advance through star lanes to the north and, eventually, the northwest, were less successful. Through some quirk of galactic geography, all the lanes investigated led to dead-end systems and relatively worthless planets. Even so, the strategy yielded three new systems, hardly worth the cost of development, but adding to the potential size of the Chamachie fleet.

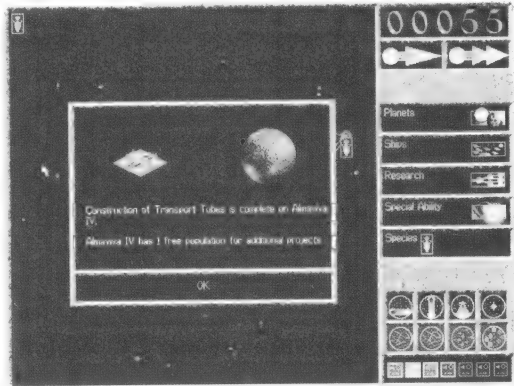


Figure 5-12. Transport tubes on Almaviva IV are a perfect efficiency complement to Chamachie rapid research.

FINAL STAGE

The final stage of the campaign began after the capture of Zilker, a prosperous system on the westernmost edge of the galaxy, located at the “joint” where the Mebes’ original line of expansion turned south toward their home system.

This is where our offensive came to a temporary halt. Ironsnout took the opportunity to refit our battle-scarred ships with new technology. While he waited for new ships to arrive from distant yards, he built up the Zilkerian planets’ defenses to a formidable state. We powerfully screened each planet with megashields, whoppers, and missile batteries.

In ancient military history, this methodical buildup always reminds me of the assembly of the Spanish Armada—although

the Chamachie fleet was considerably more successful in our endeavors than King Philip’s was in theirs!

By now, of course, the Mebes knew what was coming and where we would strike. Ironsnout sent waves of multiship Chamachie attacks against the Zilker system. Combat was furious and incessant, but Ironsnout refused to commit all of his available resources in these battles.

He was intent on maintaining the strategic buildup at all costs.

As a result, losses were sometimes heavy, even though the Mebes never succeeded in retaking a single Zilkerian planet from us. Ironsnout scrutinized the statistics carefully and concluded that the Mebes were losing 1.5 ships for every Chamachie vessel destroyed. He concluded that since we were now producing two new ships for each one the Mebes could manufacture, both time and logistics were on our side.

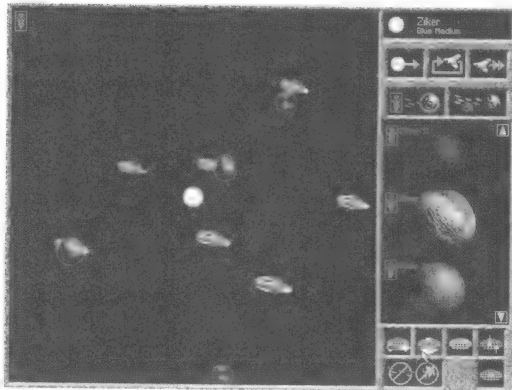


Figure 5-13.

A large Chamachie fleet of enormous-class ships is poised for attack in the Zilker system.

A CHAMACHIE JUGGERNAUT

Once the armada was ready, it rolled forward like a juggernaut. The Mebes made their big stand only one system away from their home world. The four-day Battle of Discordia, as it came to be known, was the climax.

Eight Chamachie ships were lost, but so were thirteen Mebe vessels. When it was over, the back of Mebe power was broken, and they could only offer sporadic—though desperate—resistance. Our fleet mercilessly advanced on their home world. The last Mebe stronghold fell on Day 2307. The species was extinct.

During the period of consolidation that followed, Ironsnout turned his attention to the hitherto quiescent Fludentri, who had stayed scrupulously neutral during the war, even though their ships were often spotted snooping around Chamachie territory. The hapless Nimbuloids, foolishly fighting successive wars with both the Mebes and the Fludentri, had long since vanished from the picture.

Ironsnout had been convinced for years that the Fludentri, despite their dim-witted facade, were the real threat. As he wrote in his memoirs: “All that ‘dum-de-dum’ business didn’t fool me for a minute. They were smart, prolific, and their technology, by the end of the Mebe campaign, was on par with our own. Sooner or later, we knew they would move against us.”

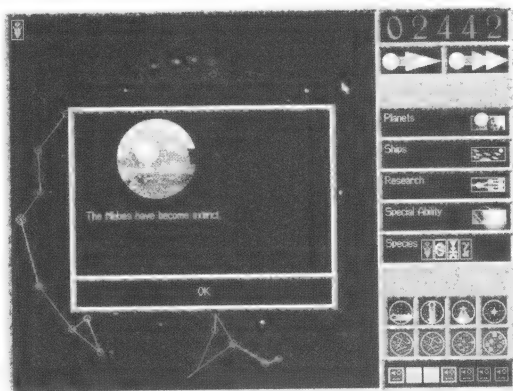


Figure 5-14.

Sic semper Mebes.

Ironsnout's campaign is a stunning success and the Mebes are history.

A WAR OF ATTRITION

After the demise of the Mebes, the Fludentri attacked. By now, the two empires were evenly matched in terms of colonies, fleets, and technology. But we had a slight strategic advantage: Our empire formed a huge sickle-shaped line, running from the “handle” in the far northwest quadrant to the “point” of the fleet’s farthest advance. All along that perimeter, Ironsnout massed compact subfleets backed by massive defenses.

While the spearhead of the original armada, now thoroughly refitted and augmented by new ships from the yards in the Zilker system, advanced east, Ironsnout launched powerful raids from all along the Chamachie perimeter. He snatched a planet here, a

planet there, nibbling away at the Fludentri’s base of power and forcing them to disperse their reserves.

There is little need to recount the long and bloody war of attrition that followed. For many days, the fortunes of war swayed back and forth. But gradually, Ironsnout’s “nibbling-away” strategy began to weaken the Fludentri’s infrastructure. At the same time, the main fleet continued to

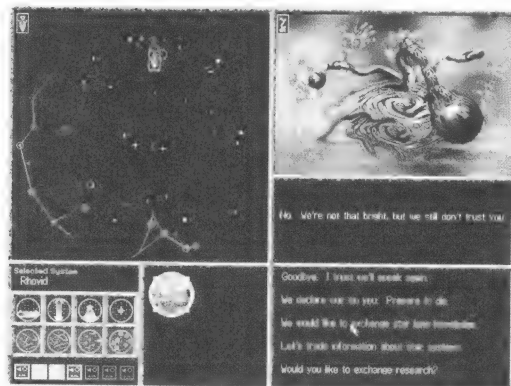


Figure 5-15. The Fludentri proved to be the cunning bunch that Ironsnout predicted they would be.

inflict slightly higher losses in the main theater of operations. The tide began to turn against the Fludentri.

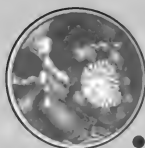
By the time we achieved total galactic victory, Ironsnout was an old reptile, well past retirement age and something of a living legend. He spent his few remaining years peacefully, devoting his time to the writing of his colorful (and monumentally long) memoirs.

The long-dreaded cataclysm struck Millitrin only a few months before his death. By then, however, we had long since abandoned the system.

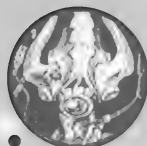
I know, personally, just how much pride Ironsnout took in having fulfilled the destiny of his race. Toward the end, he once told me with a gleam in his eye, "If there is anything more satisfying than conquering a planet, it's conquering a hundred planets!"

What a guy!

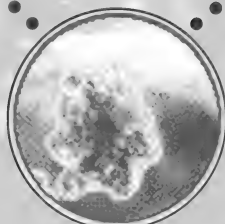
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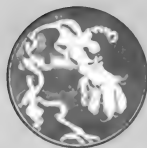
The Orfa



The Minions



The Nimbulooids



The Swaparamans



CHAPTER 6

TALES OF

THE BRAVE NIMBULOID ASCENDANCY



We Nimbuloids
are a proud,
cohesive
species,
whose
vibrational
aspirations
point to the
stars.

In the annals of the Ascendancy, throughout the farthest realms of all the galaxies, no tale bears more telling and retelling than the saga of the Great Nimbuloïd Ascendancy. Although generally peaceful, and certainly gaseous, the Nimbuloïds have known their fair share of ambition.

Now, for the first time, the actual journal of their tremendous saga is made available here to all would-be galaxy conquerors. May the Nimbuloïd experience be an instructive lesson to those cosmic aspirations.

It all began, quietly enough, on a day like any other, in an average-density, neutral-atmosphere galaxy inhabited by four other species . . .

GASBAGS ASCENDANT

Call me Ish-ka-blob, Official Chronicler of the Nimbuloïds.

I am encrypting these annals on the archival molecules of a large, eternally stable cloud of data-retentive gas high above our home world, Sagitta III, which orbits our beloved pink-red giant sun. The site is anchored by chemical/vibrational matrix bonds to the sacred gathering place on the shores of the Golden Cloud Sea, where scholars and pilgrims can consult these records in perpetuity.

It's incredible to think that, only a decade ago, our species dwelt in a content but soupy state of semiconsciousness, low in the atmosphere, seemingly forever tethered to the solid matter of the planet's surface. Then came the Cosmic Event, an inex-

pllicable tide of plasma energy—perhaps sentient. The priests are still squabbling about that point. The energy swept over our system and generated among us a staggering evolutionary jump. Energized and transformed by the wave's passing, we discovered how to transform solids into any shape.

At first, we used this new ability to create novelties, such as sculptures,

eccentric dwellings, and toys, for our amusement. Swiftly we passed through this stage, however, and began to fashion useful objects. (We first made domestic appliances, until it dawned on us that we had no real use for them.) Then began a species-wide competition, with honors going to those Nimbuloids who could create the most innovative objects and structures in the least amount of time.

Those who achieved this distinction became an elite caste—they called themselves scientists. But, as is typical of our species, they were also priests and philosophers. They built upon each others' achievements (plagiarism, although officially disparaged, proved both common and efficacious), and eventually their activities coalesced into a progressive ideology known as the Ascendancy. Its primary belief is that it is the destiny of the Nimbuloids to spread throughout the stars.

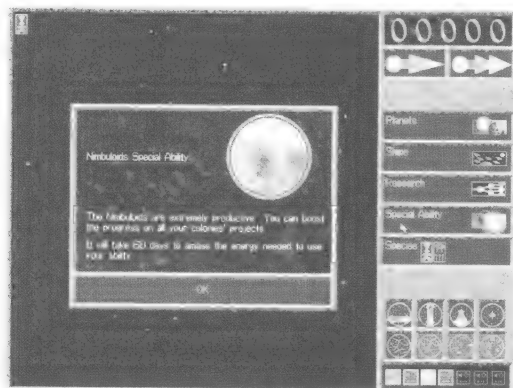


Figure 6-01.

The Nimbuloid's special ability to accelerate the speed of all endeavors is a precious one, indeed.

A NIMBULOÏD CHRONICLE

I, alas, have the technological aptitude of a Sunset Cloud, but I comprehend enough of the scientists' acts and concepts to interpret them in terms even the lowliest worker cells can understand. Within the bounds of reasonable skepticism, I, too, share the vision of the scientist-priests, even though I cannot contribute to their burgeoning achievements.

What I can do—and have officially been appointed to do—is faithfully record the saga of our Ascendancy.

We Nimbuloïds are not gross matter, nor do we have any natural predators on our world. Barring an unlucky bolt of stratospheric lightning, my life span should measure many centuries; and that is fortunate, because I suspect that the Ascendancy will be a long, perilous undertaking.

Let me therefore begin with a clean bag of gas, as the saying goes, by dating this entry as Day One of the Ascendancy.

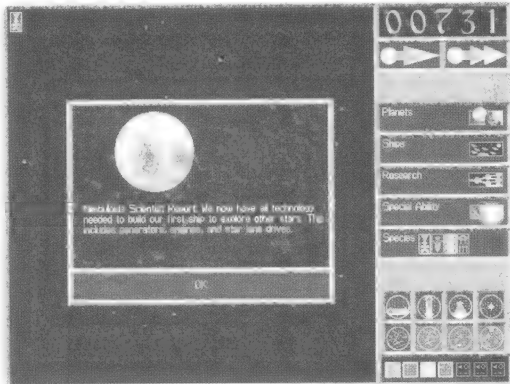


Figure 6-02. Nimbuloïd scientists have reached the first step toward travel to the stars!

THE ASCENT BEGINS

DAY 1 — It is calculated that the maximum sustainable population of Sagitta III is nineteen multiples. Is this enough for a balanced, prosperous society? Can we sustain the research and the organized effort needed to ascend? Our scientists, naturally, manifest optimism and faith. And by collective/vibrational consent, we have granted them full authority and

elected them to guide us. Time will tell whether this was a wise decision.

Their first proclaimed objective, at least, seems eminently reasonable: If the Nimbuloids are to ascend, we must free ourselves not only from the surface, but from the very atmosphere of our world. This first, most crucial stage the scientists have called orbital technology.

Much faith has been placed in the phenomenon of the collective energy burst—a short-lived but powerful species-wide wave of kinetic power that, the authorities assure us, will tem-

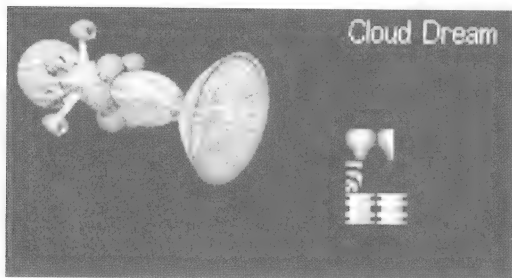


Figure 6-03.
Nimbuloid hopes
ride high on the
just-completed
Cloud Dream
spacecraft.

porarily accelerate the progress of all current projects. This, too, is a legacy of the great Cosmic Event, although its dynamics and mechanisms are as yet but dimly understood.

Experiments have been numerous, of course, but never before has the entire species been required to

manifest this effect simultaneously and toward specific ends. It will take time to “charge” the population for its first energy burst—sixty-eight days, in fact—but the theory is that, as we routinely practice, the intervals gradually will decrease.

DAY 68 — A day of great significance! Our first project-oriented energy burst has been unleashed. Estimated time to complete our first planetary development, a laboratory, is twenty-four days. Estimated time to complete the first stage of orbital research is twenty-five days. We’ll soon see what effect if any the burst has had on these timetables.

DAY 69 — Bah! Mucous! I beg history’s pardon—profanity is out of place in a formal chronicle—but my disappointment is great. There is NO progress on orbital research. Data on the laboratory is pending, but I am not optimistic.

DAY 69 (one hour later) — Optimistic news! The new laboratory is now only ONE DAY from completion, instead of two weeks! And a new research facility can only help expedite our progress. Once we get the hang of these energy bursts, perhaps they will become more effective; and, according to my scientist friends, the recharge time probably will diminish as well.

ORBITAL STRUCTURES

DAY 119 — Orbital structures at last! A shipyard glitters overhead like a new star! Now we can develop our first spacecraft. Design and implementation is scheduled in fifty days, but we'll be able to trigger another energy burst in only seventeen days, so perhaps the actual timetable will be much less.

DAY 164 — Five days ahead of schedule, we are starting to construct our first spaceship—inspiring news that brightens the clouds of our world! There's also news of a tantalizing discovery: We found the notes of an obscure, deceased Nimbuloïd inventor named Ton-Klyn, widely regarded as a flatulent gasbag of a crank during his short 526-year life. (He perished during a freak cyclonic rift.) I am told, however, that his archive-molecule diary contains—among a great deal of gibberish about space aliens implanting something called nano-chips inside his nucleus—designs for

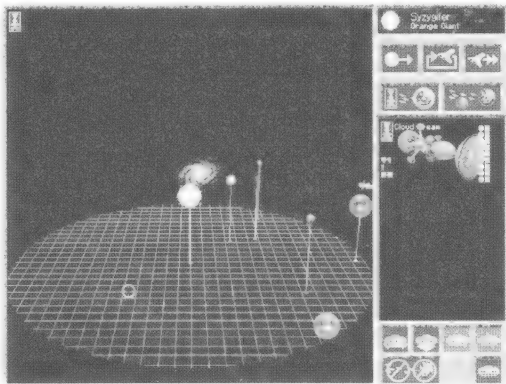


Figure 6-04.
The Szyzygifer star system—the Nimbuloïds' first star system discovery.

feasible interplanetary propulsion technology. I drift expectantly, awaiting further news . . .

DAY 214 — Using improved burst techniques, we have built an orbital shipyard. If only our population were not, by nature, so diffuse, we surely would have a more developed planetary infrastructure by now. But one can't have everything all at once, and I trust our scientific management clusters to be logical in their priorities.

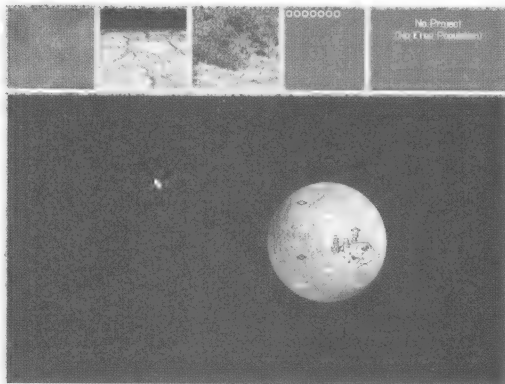


Figure 6-05.

Who knows what techno-marvels the ruins on Stavem II might hold?

shaver generators and Ton-Klyn engines are rather primitive, but we've packed the hull with several of each, in hopes of maximizing its performance. As a footnote, a subcluster of scientists has developed a technique for something called xenobiological excavations—ways to discover and exploit the secrets of alien ruins, should we encounter any. Sounds like unfounded optimism, if you ask me, but who knows? It might come in handy, sooner or later.

DAY 258 — A day of smiling clouds indeed! Our scientists report that we now have all the technology necessary to build an interstellar ship! Work on the project will commence at once.

DAY 334 — We have constructed our first spacecraft, christened *Cloud Dream*. Its proton

LAUNCH OF THE *CLOUD DREAM*

DAY 335 — Practically every Nimbuloïd on the planet massed to witness the launch of the *Cloud Dream*. A tiny sun ray of light and it was gone; propelled as much by our multitudinous hopes and dreams as by its own crude engineering.

DAY 351 — *Cloud Dream* reports a new star system, the Syzygifer system. It consists of four planets, one marginally suitable for colonization, one poorly suited, and two described as uninhabitable.

DAY 413 — Intriguing news! *Cloud Dream* reports alien ruins on the second planet of the Stavern system, which also is suitable for a small colony. A cloud-burst of argument now rages between a faction advocating Stavern II as our first colony site and those advocating Stavern I or III. The former group wishes to find out what technological marvels the alien artifacts might reveal on Stavern II. But Stavern I and III are bigger and much richer in resources. Besides, argue the critics of Stavern II, if the aliens were so damned advanced, why is their city a deserted ruin? I can see both sides of the debate, but my curiosity is keenly aroused by the alien-artifact option. Debate shows signs of becoming acrimonious.

DAY 423 — Our first colonizing ship, *Cloud Seeder*, was launched today. It will follow the star lanes charted by its predecessor. The decision of which planet to land on first will come later, no doubt after another rancorous debate.



Figure 6-06.
Alien contact!
The Orfa—ugly
and not very
bright.

FIRST NIMBULOID COLONIZATION

DAY 500 — *Cloud Seeder* has arrived in the Stavern system and has planted our first colony on Stavern II. The decision to explore the alien site, rather than land on a more suitable world, was made by a membrane-thin margin of votes. Let's hope the site contains marvels and wonders, because

the debate has generated much bad feeling.

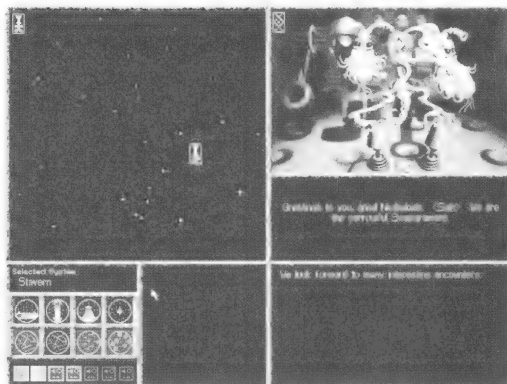


Figure 6-07.
A second alien encounter! The droopy-looking Swaparamans. Can they be trusted?

DAY 501 — First contact with the Orfa, an alien species whose appearance is highly repugnant: Gross matter beings, distinguished by their large, savage-looking mouths. One must not be xenophobic, of course, but the exchange of messages, while civil enough, leaves a rather coarse impression.

They were not forthcoming, even when we made generous offers of cooperation. They are also, evidently, not terribly bright.

DAY 551 — Mucous and runny mucous!! The alien site yielded nothing but information about gravity-flow technology, something our scientists mastered almost a year ago! The skies above Sagitta III reverberate with a sour-gas chorus of "I told you so!" from those who opposed the decision to colonize Stavern II.

DAY 553 — Thunderclap of a shake-up in the research department. Slow progress has caused discontent for several months, but the announcement that the new research project—expected to take two hundred fifty-six days even with

energy bursts—was targeted toward nuclear explosives caused a furor. We don't even have armaments for our space-ships yet—what in the name of the Great Nucleus do we need atomic bombs for?

DAY 554 — The old research team has been banished in disgrace, its leaders demoted to lowly worker cells, and an entirely new team has taken over. Its announced policy is to concentrate on practical, short-range objectives. This development was greeted with intense mass vibrations of approval.

DAY 570 — Contact in the Rhovid system with a new species: Droopy, yellow, fleshy, sad-eyed creatures called the Swaparamans. They seemed likable enough, for all the air of mysterious melancholy that hovered over them like a drizzle-cloud. We exchanged some useful information about star lanes.

DAY 624 — Yet another new species has made contact in the Stavem system. Calling themselves the Minions, they are curiously mechanical in appearance—machines covered with chitinous plates. While not overtly hostile, they were cold, aloof, disdainful, and utterly unwilling to exchange information. I rather hope we don't see too much of them . . .

DAY 636 — The effects of poor research management continue to haunt us. Intelligence reports indicate that, while we have only three colonies, the Orfa have eighteen, the Swaparamans ten, and the detestable Minions eight. As for the technological ratings—well, our data is fragmentary, but I

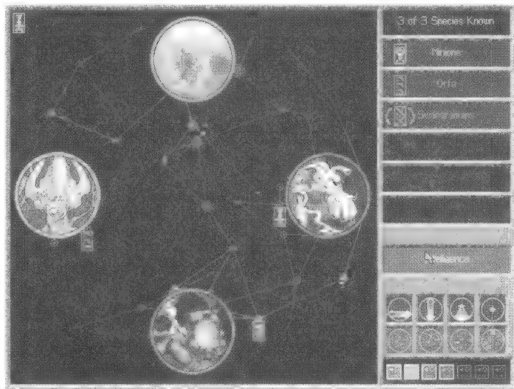


Figure 6-08. We have met three species, and now our diplomatic efforts must take a greater priority.

doubt we are much better off in that category. There is some talk about replacing the planetary management teams, but I suspect their slow performance is more a function of the botched research program rather than incompetence.

Only in one area of endeavor is the Ascendancy moving smoothly: star lane exploration. Of the ten systems we have explored, we've charted six uninhabitable planets, fourteen adjudged to be poor, eleven considered marginal, nine rated good, and two magnificent



Figure 6-09.
Abandoning the *Cloud Dream* is a wrenching but necessary Nimbuloid decision.

specimens graded prime. Interestingly enough, when you plot these numbers on graph molecules, the curve they form is almost identical to the shape of a typical Nimbuloid exomembrane! When I shared this information with the priests, they regarded it as a sign of great importance, a cosmic affirmation of the Ascendancy.

Myself, I think it's just a coincidence, but it does get one thinking . . .

DIPLOMATIC DEVELOPMENT

DAY 680 — I have submitted a proposal today. Since we've made contact with three alien species, we should form a subset of specialists whose task is to expand on those contacts and manipulate them to our advantage, so that we gain greater knowledge and promote mutually beneficial interspecies relations. I've coined a term for these specialists: diplomats.

DAY 681 — The proposal has been accepted, and I have been appointed leader of the project. I plan to concentrate diplomatic efforts on the Swaparamans—call it instinct, but I think such a strategy will, in time, bear fruit.

DAY 684 — A good guess! The Swaps (as I now call them) seem both friendly and insecure. We traded a small amount of star lane knowledge with them. Overtures to the Orfa were not so well received—they seem suspicious, even paranoid. The Minions merely sent a cold acknowledgment of our transmission, then abruptly terminated the link.

DAY 710 — The Swaps have requested an exchange of research data. We'll send them a batch of obsolescent rubbish and see what we get in return. Probably the same sort of stuff—but the exchange, at the very least, will help to build trust.

DAY 822 — Our first research campus has opened on Sagitta III. This, along with future facilities, should accelerate our technological advancement, which has, to date, been both slow and fitful.

Although the current research management team is better than that first bunch of slackers, they still keep coming up with devices for which we have, apparently, little practical use. Perhaps there are subtle interconnections which will become obvious in time, but to my nucleus, it all seems hit or miss.

DAY 825 — The valiant *Cloud Dream* has encountered a cul-de-sac. Rather than have her laboriously return and begin

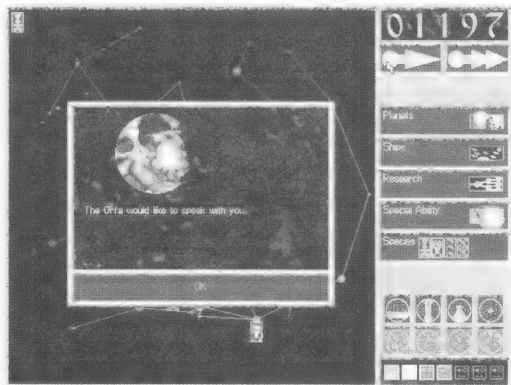


Figure 6-10. The Orfa have decided that they will honor us with a trading relationship.

again, we have decided to abandon her in order to build a new colony ship. The sacrifice of the crew was profoundly moving: They joined nucleuses, then generated a final communal energy burst, directed inward. They expired in a vortex of ecstasy, knowing that they will be eternally honored. Construction of a new ship, the *Cloud Dream II*, will begin immediately.

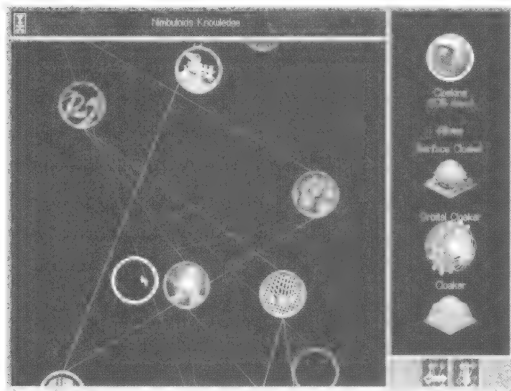


Figure 6-11.
The Tree of Knowledge bears much fruit, but requires careful nurturing.

But, like the first exchange with the Swaps, this may lead to greater trust and more significant communication in the future. They are such lumpy, grotesque creatures that they are almost endearing. But they've colonized one hell of a lot of planets, so they must not be as dumb and slothful as they look.

DAY 842 — Perhaps our energy bursts are becoming more focused and hence more effective. A species-wide effort yesterday shaved twenty-two days off the construction time of our new starship. Makes one proud to be a Nimbuloid!

DAY 865 — Another exchange of data with the Swaps. If the diplomatic relationship continues to ripen, perhaps we will enter into a formal alliance with them.

DAY 841 — Another diplomatic breakthrough! (I must be getting the hang of it.) The dour and suspicious Orfa have finally been coaxed into an exchange of star system data. Theirs is next to worthless, of course, as I predicted. (For that matter, so was the information we sent them.)

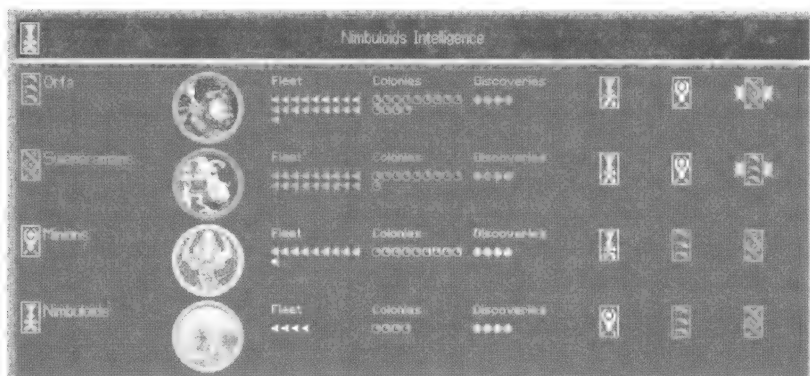
DAY 905 — Our new colony ship, *Cloud Dream II*, is ready. After much debate, we have decided to colonize Sophia I. As planets go, it's only marginal, but it, too, contains alien ruins and artifacts. And its occupation will give us control of another system, which in turn means we can enlarge our fleet. The Ascendancy progresses, but the sheer scale of the endeavor is sometimes daunting to contemplate. It is no small undertaking, even for a race as advanced as ours.

COLONIZATION ACTIVITY

DAY 961 — Whatever the motives of the Swaps, our continued exchanges of research data have paid dividends. Our scientists report modest but significant gains in several areas of vital technology.

There is, however, a troubling development. Our explorer ships have discovered and charted thirty-one star systems, yet we seem unable to chart a viable course for many of them for colonization. We know those worlds are out there, some of them with prime planets, but now that we have the capability of colonizing them, we find them inaccessible. This is probably due to the activities of rival species, but it is a setback to our

Figure 6-12. Staying out of the Orfa-Swaparamans war is a key to our diplomacy efforts.



strategy of seeding far-flung systems and then working back from them, once they are able to produce ships on their own. The faction that advocated this strategy calls it the ink blot concept, but it is now no longer viable. Perhaps that is for the best; we'll colonize our own neighborhood first. Sooner or later, as the

Ascendancy expands, we'll need all that early star system data, so it cannot be argued that our early explorations were a waste of effort.

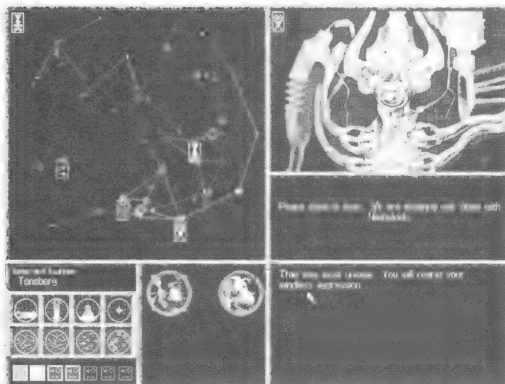


Figure 6-13.

The Minions have declared war on the Nimbuloïds! This galaxy grows dangerous.

which continues to send back information about systems at the far reaches of the galaxy, will be spared.) A top secret intelligence report indicates that, although our overall technology appears to be roughly comparable to that of the other species, our colonial empire is inferior to everybody else's. This is an intolerable situation, not to mention a drag on the infrastructure necessary to sustain the Ascendancy.

DAY 985 — Evidence has reached us that a state of war exists between the Orfa and the Swaps. What this portends for us, only the Great Nucleus knows. We are allied with neither race (and just as well for them, considering how rudimentary the armament carried by our ships is). But neither do we have any reason to wish them harm. Unless, of course, either of them starts mucking up our own activities.

DAY 979 — A momentous decision has been taken: To abandon all our first-generation explorer ships in order to build more advanced ships and launch a major program of colonization. (Only *Cloud Seeder*,

DAY 1002 — The planetary development council on Sagitta I has been sacked and replaced. A colossal kickback scheme had caused all resources to be diverted to construction of a new shipyard—but since we cannot deploy any more ships, the project was about as useful to us at this stage as a giant mucous sac. From now on, I trust, planetary development will proceed along more rational lines. The resources being wasted on that shipyard have now been diverted to a new research center.

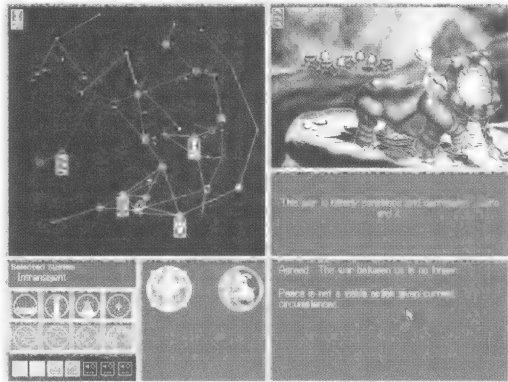


Figure 6-14.

The Orfa request for peace is as enigmatic as their original declaration of war.

DAY 1048 — Our new colony ship, *Ascendancy I*, is complete. Its destination is Tonsberg IV, a large and potentially bounteous planet.

ORBITAL DOCKS

DAY 1059 — The colony on Tonsberg IV is founded, our fifth colony. My pride and excitement are mitigated by the fact that the Orfa own sixteen colonies, the Swaps nine, and the enigmatic Minions ten. However, since the Swaps and the Orfa are still at war, those numbers may change any day.

As always, arguments rage in the cloud chambers of government. Should we build a fourth ship now or wait for new technology and planetary development? I sense that our galaxy is getting not only more crowded, but a bit more dangerous as well. Decisions that seemed clear cut only a century ago are now hedged about with new risks and ramifications.

From all the debate, however, an interesting proposal emerged for the construction of orbital docks, so that we can refit and modernize our existing ships between missions. Only a real mucous bag could fail to see the logic of that. Construction of the prototype will begin as soon as population resources permit.

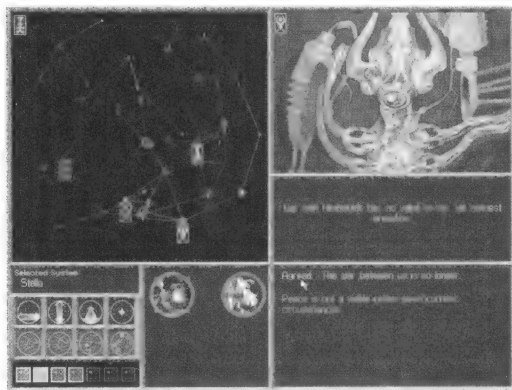


Figure 6-15.
Glorious gas-
bags! The
Minions are
requesting
peace.

DAY 1123 — Dire alarms! For some unfathomable reason, the Minions have declared war on us! A crash program of military preparedness will begin immediately, but how can we hope to match their power before they descend on us?

I could, of course, attempt to establish an alliance with the Swaps, who also are threatened by the Minions. Perhaps our combined fleets will be strong enough to withstand this aggression, or at least give the Minions a reason to reconsider. If the buggers even need reasons for what they do . . .

DAY 1124 — The Swaps have accepted my proposal and a strategic conference is under way. Our ships are being routed to the new orbital dock at Sagitta III, where they will be outfitted with new weapons and shields.

DAY 1157 — I've just learned that alliances can be tricky. In exchange for helping us against the Minions, the Swaps have asked us to declare war on the Orfa. An alliance is an alliance, so we did. But we have no intention of actually fighting the little wretches, for they are clearly not as serious a threat as the Minions—if indeed they are any kind of threat at all to anyone.

DAY 1195 — Today we opened our first industrial megafacility. Our energy bursts, while they are as effective as ever, now seem to require a longer recharge time. Logic suggests that this is a function of how spread out our still modest population has become.

DAY 1206 — Our “war” with the Orfa almost turned into the real thing. One of their ships infringed upon our space and made hostile moves toward one of our ships. After maneuvering in a threatening manner, however, their ship ducked back into a star lane hole and vanished. Were they probing our defenses or sending us a warning? In any case, we were lucky, for our ship was but lightly armed. Since this war is totally a bluff on our part and since we are not even close to being prepared for a real conflict, we may have to pull out of our alliance with the Swaps.

DAY 1207 — Most curious. We received a peace offering from the Minions, with whom we have yet to exchange an angry shot. Of course, we accepted. How will the Swaps react when they learn of this new development?

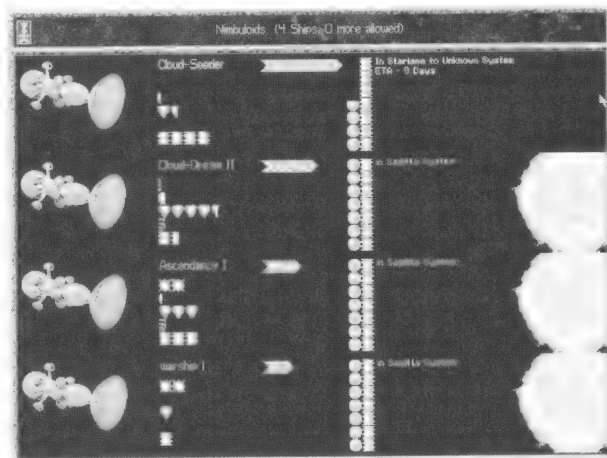


Figure 6-16.
The Ships
screen reveals
the mighty
Nimbuloïd
armada!

DAY 1209 — A warship was dispatched to found a colony on Stavern I, an enormous sphere rich in minerals. Meanwhile, *Ascendancy I* is proceeding to the spacedock near Sagitta III for a much-needed refit.

DAY 1212 — Since we've concluded an armistice with the Minions, we've chosen to make peace with the Orfa as well. How

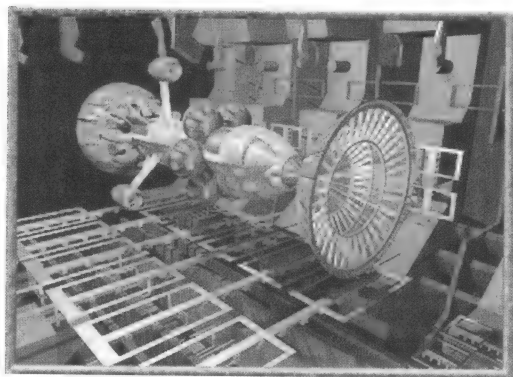


Figure 6-17.

Properly building and outfitting a Nimbuloid ship is part science, part art, and plenty of gas.

much I am learning about this strange field of diplomacy! We've just fought a totally bloodless war with two species, both seemingly more advanced than we are! In all modesty, I think I handled the situation rather well; at least they know now that they can't push the Nimbuloids around! Of course, they didn't really try... not this time, anyway.

DAY 1219 — The Swaps are asking for us to renew hostilities with the Minions. I disliked having to turn them down—our alliance has been a good one. But we're simply not ready for warfare at this stage of the *Ascendancy*. However, if our intelligence reports indicate that the Swaps are losing, we'll reconsider, if only to take some pressure off them.

DAY 1348 — A century of peace and progress. Among the Nimbuloids, I sense a growing complacency, as if the *Ascendancy* were a smoothly running machine that only needs an occasional research kick to keep it humming.

DAY 1452 — After decades of factional rancor, the Fundamentalists have achieved power. Their theory is that the great cloud masses of Nimbuloids have lost sight of the original goal

of the Ascendancy, and have become complacent sensualists, lacking in zeal and drive. We need, they claim, “to reignite the fires in our nuclei!” To rekindle the ascendant spirit, the new government proposes a new plan: Mass our three best ships at Sagitta III, refit the other two obsolescent ones as escorts, then set forth en masse to found three new colonies.

A NIMBULOÏD ARMADA

DAY 1529 — The grand expedition is ready! May the Great Nucleus guide their way! A new and glorious page in Nimbuloïd history is about to be written (and I, of course, will be writing it).

DAY 1591 — We founded the first new colony on Stavern IV, a big but by and large unattractive world. Our scientists assure us, however, that new technologies will soon be available that can transform such drab planets into prosperous and productive assets.

DAY 1606 — Received expedition reports from the Icarus system. The oldest ship, though refitted extensively, is much slower than the others. We must remember not to stint on engines during refits, however great the temptation is to stuff the hulls with fancy new gizmos.

DAY 1614 — Once more our society is in turmoil! A group of dissident scientists has been propagating the idea that, while

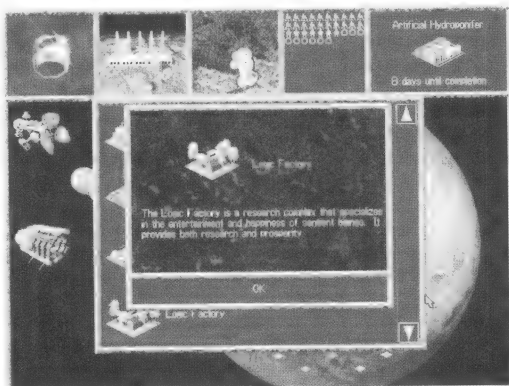


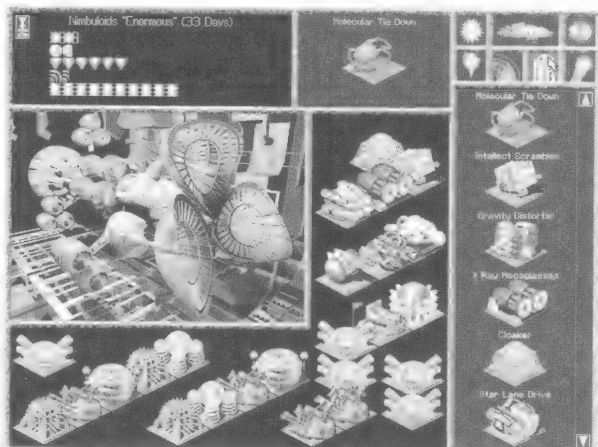
Figure 6-18. What a wondrous place the Logic Factory has turned out to be! Much merriment for many Nimbuloïds.

it's all well and good to revitalize the Ascendancy, there is no need to do so in an atmosphere of dour puritanical gloom. After all, they point out, it's been about fifteen centuries since anybody's had much fun! Happiness, they maintain, is a vital ingredient to successful ascending.

Lured by rumors, I drifted yesterday over to the new Metroplex, a vast technological-residential-industrial complex of staggering scope and potential. There I visited a new facility opened by the dissidents. It's called, with some irony I suspect, the Logic Factory. It is nothing less than a high-tech amusement park. I spent about an hour with the amusement gas inhaler, and it left my membranes quaking with mirth! I must tell my friends about it!

DAY 1622 — Our expedition attempted to found a colony on Icarus, but discovered that there were no more colony modules! The ship assigned to the Icarus project has been traveling all this time without the very thing needed to perform its mission! The shipyard bureaucrat responsible for this oversight has been demoted to a mucous disposal unit, as well he should be! I'm so disgusted! I'm taking the rest of the day off to visit the Logic Factory again.

Figure 6-19.
The enormous class of space-faring ships is a sign of the growing might of our Nimbuloïd empire.



Day 1622 (later and happier) — Great Nucleus, that amusement gas is good stuff! Back to work now; a chronicler must chronicle. Slow but steady progress in all areas of ascent. We now have eight colonies, two more than the Orfa, poor wretches. They are indecisive and their systems are probably ripe for exploitation. Unfortunately, their systems are also on the other side of the galaxy, so we can't as yet take advantage of them.

The Swaps have sent a haughty message demanding research data. Who the hell are they to demand anything? We politely but firmly refused.

DAY 1721 — All three colony ships have now been refitted, properly this time. And we've got a new, large ship, the *Storm Cloud I*, outfitted with a new cloaking device (so alien vessels can't see what we've got under our hulls). There is also a curious weapon called the intellect scrambler, which, when directed against an alien crew, apparently turns even the best-trained specialists into mucous heads.

Also worthy of report is a new planetary facility called the Engineering Retreat, representing a powerful synergistic interface between pure research and practical engineering. The idea



Figure 6-20.
To begin an assault on the Minions' Mira system, a trusty invasion module is a must.

has great merit in theory, but I wonder just how comfortably those two disciplines can mesh. Being an academic of no small repute myself, I retain a few molecules of skepticism.

DAY 1741 — More demands from the Swaps. More refusals, a bit chillier this time, from us. Our own research programs are advanced enough now to require no outside help, and I suspect theirs are, too. Besides, their tone seemed more like pleading than any really threatening demand, if I know my diplomacy (and by now, I think I do!).

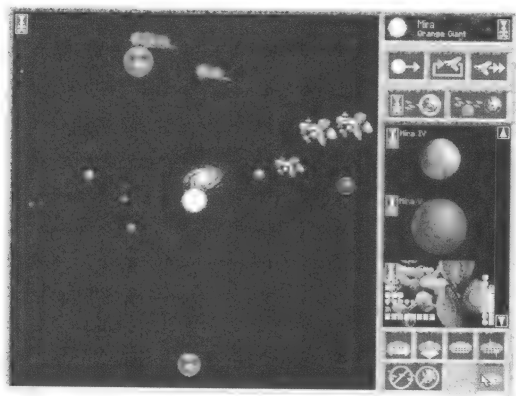


Figure 6-21.
We are taking
our assaults
directly to the
Minions. And
Mira V is ours!

been reorganized with a scientist takeover—a co-ordinated plan by means of which an entire planet's output increases by a factor proportional to its industrial output. The pros and cons of this theory are still debated, but I figure, what the hell? It can't hurt.

DAY 1745 — Great success! Our fleet has founded three new colonies and is en route to the home system for refit. We ascend mightily, now; there is no stopping us.

DAY 1750 — Sagitta I has reached maximum population density and has

DAY 1801 — We are now the third most powerful species in the galaxy, with twelve by-and-large prosperous colonies.

“ENORMOUS” SHIPS

DAY 1920 — We’ve just launched the first of our enormous-class dreadnoughts, packed with the latest weaponry and more powerful shields and generators. Each of the massive ships is designed to carry two invasion modules and one colonizer (for targets of opportunity, just in case). Let anyone, even the brutal Minions, challenge us now!

DAY 2031 — We now have fifteen colonies, many of them with powerful ships on-station. I am somewhat worried, though, about the dispersion of our fleet. In military circles, there is debate. Should we manufacture a larger number of medium and large ships? Or should we concentrate on the enormous class, which, though probably unbeatable in a ship-to-ship encounter, requires . . . well, *enormous* amounts of time and money to construct. But those ships have become symbols of Nimbuloïd pride—visible manifestations of the Ascendancy itself—and it is unlikely that the authorities can bring themselves to change their priorities.

DAY 2082 — Our strategists have decided that we are now ready to challenge the Minions (the other two species represent no real threat to us). The decision has been made to invade their Mira system in force, seize all the planets therein, and see how they respond. Well, it doesn’t take a rocket scientist, as they say, to predict what that response will be. I hope our leaders know what they’re doing!

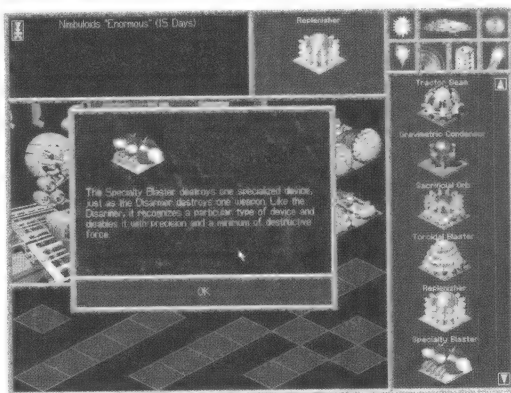


Figure 6-22. Tough times do not last, but tough weapons do! Make ours a specialty blaster.

This is a risky step. I shall try to establish an alliance with the Swaps before the war begins, as surely it must. Maybe I should try to do the same with the wretched Orfa, although their assistance would be marginal at best.

DAY 2135 — Intelligence reports that we are now marginally superior even to the Minions. Mayhap the militants are right:

This is the time to challenge the Minions. This galaxy isn't big enough for both of us!

The war party's reasoning goes like this: First, the Minions are far-flung and cannot be strong everywhere (but the same can be said of us). Second, our technology is almost equal to theirs. (They just pulled slightly ahead of us, but who knows which area of research they're focused

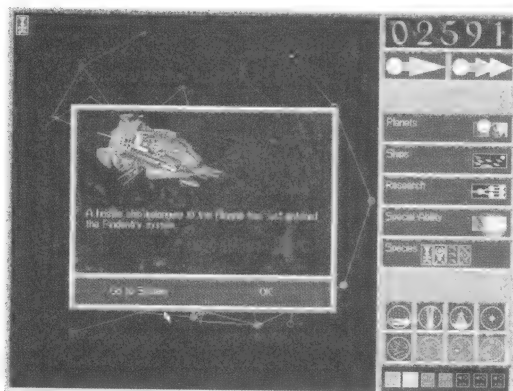


Figure 6-23.
A hostile Minion ship has entered the Pindentry system.

on?) Third, an alliance with the Swaps is likely. Finally, we now have gizmos called orbital whoppers to defend planets in systems where we have no ships.

DAY 2247 — We captured Mira V, and the Minions promptly declared war, to no one's surprise.

DAY 2276 — A Minion fleet of five ships counterattacked the Mira system. All three of our ships were vaporized after a raging battle, as were two of theirs. However, we lost control of the system. A mysterious directive appeared on all data clouds simultaneously, informing us that because of that loss, our latest ship had to be scrapped. Whence comes this dire intervention? Is there a force out there imposing rules upon us?

Great Nucleus, but the universe is a strange and unforgiving place!

WAR AND DIPLOMACY

DAY 2296 — I have convinced the Swaps to declare war against the Minions. What actual effect that will have remains to be seen, but it will certainly take some pressure off of us.

DAY 2303 — Using new classes of ships, we have recaptured the entire Mira system. Intelligence analysis of Minion operations there has revealed that they possess a deadly special ability. Their invasion modules can bypass surface shields by somehow nullifying them, rendering them as impotent as a bag of gas. Acting on this information, our researchers have begun to deploy long-range orbital whoppers to replace existing and less effective orbital shields. The next time the Minions try to invade one of our worlds, they'll be in for a nasty surprise!

DAY 2345 — Two powerful new ships, HMS *Steve Foole* and HMS *Bateman*, have successfully invaded the Icarus system.

DAY 2080 — Minions have struck in three systems at once! The new orbital whoppers blasted a large-class attacker in the Panacea system, while the HMS *Steve Foole* blew up another in the Ajax system with its new myrmydonic car-

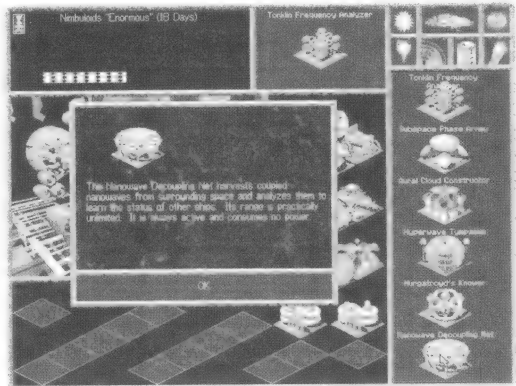


Figure 6-24. Nanowave decoupling nets are a key to uncovering the status of alien ships.

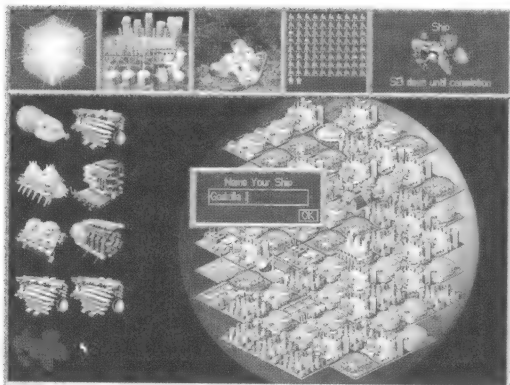
bonizer. This action caused the other Minion craft to flee the system!

DAY 2395 — We've finished a new, standardized class of enormous-class ship, outfitted thus:

- ✓ One disarmer or intellect scrambler
- ✓ Two smart bombs
- ✓ One star lane hyperdrive unit
- ✓ One myrmydonic carbonizer
- ✓ One shield blaster
- ✓ One accutron
- ✓ One gizmografiar
- ✓ One replenisher (for emergency power to weapons)
- ✓ One colonizer and two invasion modules
- ✓ Four van Creeg hypersplicers (all this stuff just gobbles power!)
- ✓ Three graviton projectors
- ✓ Four deactotrons (for massive shields)
- ✓ One long-range ueberlaser and one ferngnatz lens as standard long-range weapons

Figure 6-25.

A new ship, *Godzilla I*, enters the war.



DAY 2435 — Received message from the Minions, requesting an armistice. We'll give in, but only until our new ships come online.

DAY 2511 — Sneak attack on the Pindentry system was successful, although we lost one dreadnought and had to bombard the main planet for four days before being able to invade.

DAY 2527 — The inertia negator, our new engine technology, is ready. It is said to be at least as powerful as the graviton projectors, but much less power-hungry. New gizmos are being developed and installed so quickly that sometimes, in the heat of battle, ships' captains forget to use the bloody things. Therefore, we have only fragmentary data about how effective some of these devices really are.

DAY 2537 — We've lost the Panacea system. More orbital defenses are being installed as rapidly as possible, since they alone are able to repel a multiship invasion force.

DAY 2569 — Major victory in the Pindentry system! Three enormous-class ships blown to atoms by the orbital whoppers and one on-station defensive ship destroyed. During the confusion of battle, alas, a careless shot from one planet struck and damaged our own ship. New disciplinary and training procedures will be put into effect, so that this never happens again.

After such a victory, the moment is ripe for us to advance aggressively.

DAY 2612 — We've initiated scientist takeovers on several planets that have reached maximum population density. We also are automating selected sites.

DAY 2599 — We can now outfit our ships with nanowave decoupling nets—sensor units whose range is vast, which consume little power, and which are supposed to be able to supply detailed information about enemy ships, even if cloaked. (But

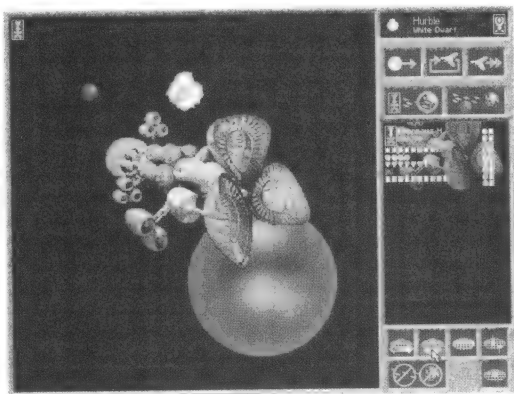


Figure 6-26.

A close-up of an enormous-class ship.

what if the Minions have better cloaking technology than we do?)

We're also deploying nanomanipulators as armament. The theory behind them is abstruse, to say the least. They supposedly "jumble reality" aboard enemy ships, causing massive internal damage to their systems. Sounds good, whatever it means. Because they devour so much power, however, we're also having to refit ships with nanotwirler generators.

DAYS 2739-2748 — Pindentry II invaded! Ajax system lost! Icarus also attacked, but the defenses held, just barely. Where did the Minions get all those ships? In ten days, we've lost four planets and two systems, and again—via one of those mysterious edicts—we are compelled to scrap our latest ship. Is there no cosmic justice?

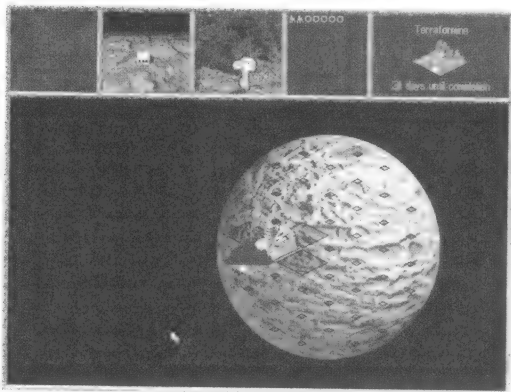


Figure 6-27.
Terraforming
takes time, but
can enliven
dead Husk
planets.

DAY 2805 — We've acquired a couple of new, mostly worthless systems out on the galactic fringe, and thus were able to rebuild our fleet to eleven ships. On the Intelligence graph, the Minions' fleet looks gigantic, but I am informed that the symbols represent total known construction rather than

extant ships. Maybe the number of symbols actually reflects all the losses they've suffered and had to replace.

DAYS 2797-2918 — Events overwhelm me (and my fondness for amusement gas sometimes makes this scribbling seem both tedious and, on the morning after, unintelligible). We are locked in a war of attrition, with each side winning and los-

ing a system here, a system there. On a ship-to-ship basis, we're still winning most engagements.

Tactically, the Minions prefer to mass big fleets. But one of our older weapons, the smart bomb, remains very effective. Its projectiles simply bounce from one Minion ship to another until the energy is depleted, inflicting moderate to heavy damage on every enemy ship within range.

DAYS 3015–3178 —

We have begun terraforming dead Husk planets. And we have developed a fascinating new communications system called the Internet. (I could spend days browsing its depths, and have downloaded some of the most amazing erotic gaseous images I've ever seen!) We have also invented a dreadful new weapon called the disintegrator, for installation in our new Godzilla-class ships.

DAY 3343 — Now it becomes evident why the Minions have not been acting as aggressively toward us recently. They have exterminated the Swaps! The news sends a cold vibration through my membranes. To think of an entire species, a relatively advanced and honorable one, too, wiped out.

On the other hand, now would be an excellent time to grab some of their planets. I mean, it certainly wouldn't upset them any more, would it?

DAY 3523 — Incredible as it seems, our scientists report that we have reached the end of our possible technological development.

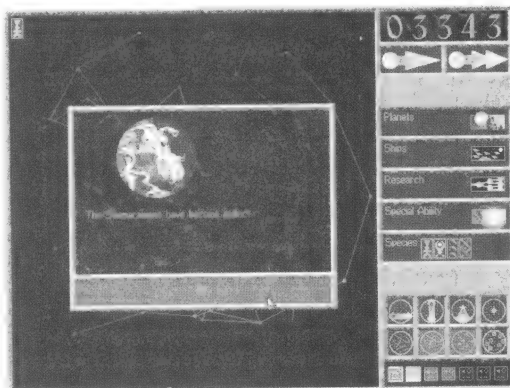


Figure 6-28.

The once-mighty Swaparamans have been destroyed by their own incessant search for conflict.

More ominously, scanner reports indicate the Minions are massing several gigantic fleets. In a panic, the strategists are now scurrying to produce quick, cheap warships armed only with disintegrators and one or two other weapons. There is also a program to develop something called kamikaze ships, equipped with massive self-destruction weapons. Theirs would be one-way missions, to drive straight into a Minion fleet and detonate. Many Nimbulooids have volunteered, but there may be little time left to implement even this desperate strategy.

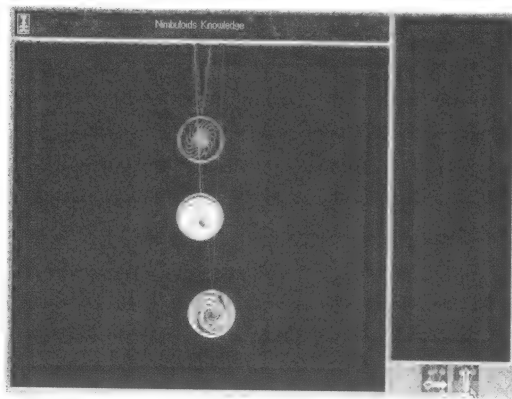


Figure 6-29.
Nimbulooid
research
reaches an end
not with a bang
.but a whimper.

DAY 3556 — Events move swiftly and with stunning force. One by one, our systems are invaded and our ships destroyed by overwhelming Minion fleets! Not that we haven't fought valiantly. In the Tonsberg system alone, they lost four enormous-class ships before breaking our defenses.

DAY 3563 — All is lost. The ascent, so long and proud, has, with cosmic irony, turned into a descent from which there is no escape. Our fleet is gone now, and we have only one system left, the home worlds of Sagitta. Even as I record these final words, the Minion fleet is approaching. Needless to say, surrender is unthinkable, as we will resist to the last orbital whopper.

Where did we go wrong? Did we declare war too soon? Did we squander resources on enormous-class ships when our colonization efforts would have been better served by cheaper, more quickly built designs? Did our researchers explore the Tree of Knowledge as efficiently as they might have? Should we not have

relied so much on self-management teams to handle planetary affairs?

Perhaps the Minions' historians—assuming they have any, or any interest in anyone but themselves—will study our annals and discover where and when we took the wrong turns that have led to our extinction. I wish I could read that account, when and if it is ever written.

I close now. Already the night sky glares with exploding whoppers and Minion rays. Soon I, this great city, and my species itself will be no more.

I shall spend whatever time remains to me over at the local Logic Factory. I hear they have some dynamite new amusement gas.



A grayscale cosmic background featuring a dense field of stars, a bright star with a diffraction pattern on the left, and a curved horizon of a planet or moon in the lower right.

CHAPTER 7

MEET THE COSMIC CREATORS



“We wanted
our game
to be totally
interactive
and for
the player
to define
the way
it unfolded.”

Previous page, the Logic Factory crew (from left): Jason Templeman, Jason Decker, Arthur DiBianca, Thomas Blom, and John Paul.

In the universe of computer gaming, the twelve-month-old Logic Factory is one of the newer and brighter constellations. With the company's first game, *Ascendancy*, founder Jason Templeman and his seasoned five-member development team are blazing new trails in a crowded firmament.

Ascendancy is very much a team effort, but much of the early conceptual development was carried out by Templeman and Thomas Blom, vice president of product development.

Templeman and Blom are alumni of the highly successful Origin Systems, a division of Electronic Arts. Templeman was the lead programmer on Origin's ground-breaking *Strike Commander*, and Blom served as director of development services and headed the programming department for Origin.

The dynamic duo not only worked closely together on game design and programming at Origin, but they became fast friends as well. When Templeman determined that the time was right for the Logic Factory, he hired Blom to help shape the company's games.

Shortly before the release of *Ascendancy*, Templeman and Blom discussed the new company, their philosophy of game design, and the game itself.

SELBY BATEMAN: *Can you tell us more about your goals for the Logic Factory and why you started this company?*

JASON TEMPLEMAN: The purpose of the company is to make really neat games. That's our primary motivation. Making money isn't bad, and we'd like the company to be successful. But we don't want that to become more important to us than our motivation for doing what we think is really fun, interesting, and neat. And the freedom to do that is probably the biggest motivation.

THOMAS BLOM: In a nutshell, it's the freedom to do our own thing, to do what we want to do.

There's a trend in the industry—especially with larger companies—to develop interactive movies with very large budgets and very large teams that are put together. We find that most of those don't really have much game content.

Those of us here who do the designing and programming talk about the “good old days” of playing the original *Zork* adventures. In those games, the technology was simple, but the writing was good and the game play was good—very rich fictionally. That's kind of what we wanted to get back to: doing real games that are a lot of fun to play and that you can play a number of times.

In fact, one of our design goals on this game and on future games is that we want to create games that are fun for us, the designers, to play once they're completed. And that's a hard thing to do because you're usually pretty sick of a thing once you've worked on it for a year.

But it's actually been true of *Ascendancy*. We've been playing it quite a bit just because, with the number of species and the number of combinations that can happen, it's still fun for us to play as well.

BATEMAN: *How did the two of you get together?*

TEMPLEMAN: We've been close friends since we worked together at Origin [Systems]. I had been trying to get the

Logic Factory rolling for awhile. We had always talked about someday going off and doing our own thing.

When it looked like the Logic Factory was about to take off, we joined forces. After Thomas came aboard, we really got things happening.

BLOM: Jason left Origin about two years ago, and I left about nine months after he did. He was off working on some designs, and I was doing some [Microsoft] Windows development.

We're good friends, and we'd hang out at the lake together and talk about what we were working on. Every time we hung out together, we were saying "Gee, we really should be working together!" So we ended up joining together about a year ago and got underway with *Ascendancy*.

BATEMAN: *The Logic Factory has offices in Carmel, California, and in Austin, Texas. Who does what?*

BLOM: Austin is the development office, where all of the game design and game development goes on. Carmel is where the Templeman family is located—Jason's brother Todd, his mother Tam, and his father Jay. Jay's a lifelong entrepreneur, and he's been invaluable to us with his business connections around the world.

So in Carmel, they're our buffer from the outside world in a sense. They handle the accounting and deal with our distributors and with the marketing and public relations. They're a buffer so that we can pretty much hole up here in Austin, forget the outside world exists, and concentrate on making good games. That seems to be a fairly typical split in a lot of companies.

BATEMAN: *Let's talk about game philosophy. Ascendancy provides a rich gaming environment. Could you discuss what you think makes a good game and what the goals should be in creating a good game?*

TEMPLEMAN: *Ascendancy* is basically the kind of game I most wanted to play—the game that we thought would be the most fun to play. That’s what I was trying to think up—what would I most want to play next if I could take anything and just try to design that game?

I’d always been a fan of games, ranging from board games to computer games. *Civilization* was certainly one of the games that I really liked. And I thought, “Hey, man, we could do something along those lines and do it really better in terms of rich environmental sound and art work and everything.” Take the concept one step further. Certainly, I wanted to get away from what had been done before but definitely keeping in mind what I thought was fun.

One of those things was the board game *Diplomacy*. I always thought it was great fun, and I wanted to capture some of that spirit. When you play *Diplomacy*, the rules are very simple and elegant. The majority of the game takes place with a sort of wheeling and dealing between the players, and I wanted to capture some of that in *Ascendancy* as well.

A couple of other examples of games I liked were *Star Control II* and *Star Flight*, where you get to encounter a lot of interesting species. I also wanted to take that one step further—where [the aliens] were bizarre and different from the standard science-fiction concept of an alien. Not even to have humans in the game. We wanted to get that feel as much as possible.

I’d always been blown away by the whole concept of space. With that many stars and that many planets, the chances of there being life out there somewhere become very great, depending on how you make your calculations. When I was a kid I used to watch “Cosmos” on PBS, and it really captivated me. I was always into astronomy; I studied it in school.

BATEMAN: *Your educational background includes astronomy?*

TEMPLEMAN: Physics was my major at Berkeley, but for awhile I had a double major in astronomy and physics. I

dropped astronomy as a major to be able to take some philosophy courses, and I ended up majoring in physics. But my motivation behind being a scientist was that sense of fascination.

I wanted our game to be totally interactive and for the player to define the way it unfolded. I wanted to try to impart that sense of vastness and that sense of exploring the unknown that I always thought was so compelling.

BATEMAN: Ascendancy does a good job of capturing a sense of the vastness of space, but it's remarkably easy to follow.

BLOM: One thing that we think makes a huge difference is the ease with which a user can play, so that it doesn't feel frustrating. Things feel snappy, and you want to feel like you're never lost as far as what you want to do. Or, if you're feeling lost, there needs to be an easy way to find help. We paid a lot of attention to that. I think that can make a bad game bearable, and it can make a good game great.

BATEMAN: And a lot of that has to do with Ascendancy's interface.

BLOM: Yes. That's one thing in our eyes that's required—a very good user interface, something that feels polished and is easy to navigate. We're pleased with our results on that, that's important. If a piece of software feels clunky—even if there's a good content behind it—a lot of people won't get to it because they'll be frustrated and won't play.

BATEMAN: Ascendancy's tutorial system and click-help system are very complete and very clean. Did you have a model for that?

TEMPLEMAN: Thomas was working on some system programming, getting our windowing system working. We'd talk about a particular screen, and I'd go off and try to design the way it would work.

We went into the project with about fifty typed pages worth of design notes, and that was really just a start. After

we had that, we got down to designing screens. We enumerated each screen, typing in sort of an outline of what we absolutely needed to do. We knew what we wanted to do with the game already. So we tried to devise a screen to present as much useful information as possible in as quick a way as possible and also have all the controls players need.

We'd enumerate all that stuff, and then I'd sit down with a paint program and basically work on it and keep on working and working and working. On some screens, such as the Planetary screen, we went through a number of generations before we were happy with the look of the screen and how it presented the information.

So, the visual aspect of our interface, went through a lot of really intense examination. We were focused on the interface from the very beginning—fanatical about it really. We'd look at it, we'd try to maneuver it, move the components around and reshape them and resize them until they were perfect. And then we'd take another hard look at it.

Some of our first attempts at the Planetary screen were much more complicated. They had a lot of icons to represent things, and they had a lot more controls. And they were very busy and sort of intimidating, even to us. We just weren't happy with it, so we kept on working on it and went through a number of revisions.

BATEMAN: *Tell us about the windowing system.*

BLOM: When I wrote the windowing system for our game, which included a tutorial mechanism, I was not consciously thinking of Microsoft Windows. But because I've done a lot of Windows programming, there are a number of similarities.

If you want to talk about any model, I've described it to people as something like Microsoft Excel or Microsoft Word. Those products come with tutorials that interactively show you how to do things. That was kind of a model.

I haven't seen anything like that in games before. Those Windows products are good examples of products that are

intended to be very mass-market; and they have that mechanism to help people not to feel lost and not to feel frustrated.

It also was technically similar to the way it works in Windows. The way a tutorial works is that it simply records the event as you do things and you can play them back. So we interactively recorded them here, and it plays it back as we recorded it.

BATEMAN: *How did the idea for the game itself come about?*

BLOM: Jason and I worked for six or eight months together before we started hiring other people. Jason had the basic design down, a content design. No technical details were worked out and not a lot of the game-play details.

As far as it being a space exploration strategy game and as far as the battles working the way they do, Jason had that in his head when I joined.

Also, exploration and discovery are fundamental things in a number of games—kind of a motivating thing to get someone to keep playing the game. Discovering new worlds and things like that. We had talked about doing space exploration games before, and I'm not sure why the space one got done as opposed to some of the other designs we had.

BATEMAN: *How long did it take to develop Ascendancy from the time that you two first started talking about doing it until now?*

BLOM: It's been almost exactly a year. We finished the game in just under a year from the time that we started it. That's actually something we're proud of, being able to tell our distributors early on when it was going to come out, and then delivering the master [disc] down to the day we said it was going to be done.

BATEMAN: *That's remarkable these days in computer game development.*

BLOM: *(Laughs.)* We got several faxes to that effect from our distributors saying, "Wow, that's unprecedented!"

BATEMAN: *What was the size of the team working on Ascendancy?*

TEMPLEMAN: Thomas and I started out. We then began working with some people outside the company who weren't actually employees. For awhile, the whole thing was running on a contract basis where people who weren't actually full-time employees would do some stuff for us—like some artwork and some sounds. Blom and I were working on the programming, and we had John Miles' libraries for the low-level [programming code]. He's in Austin, so we had his support in the low-level area.

But then eventually we brought everything in-house. After Thomas came on, we got Arthur DiBianca, John Paul, and Jason Decker. Arthur is a designer/programmer; he used to work for Origin as well. He pretty much did what Thomas and I did.

I did the design and the overall direction and some of the artwork and programming. Then Art and Thomas were heavily into the programming, and also heavily involved in the design. Jason Decker and John Paul did all the art in the game, or the vast majority of it. Then Nenad Vugrinec composed all the music and soundtracks. I'm really proud of what Nenad did.

BATEMAN: *So the team overall ranged from the two of you at the start to . . . how many?*

TEMPLEMAN: On the development team there were six people. There are nine of us in the company.

BLOM: Art DiBianca is a talented designer and programmer. It was in April or so that we hired Nenad, a phenomenal musician and composer. He's Croatian, and he's won a number of awards for soundtracks that he's done for several Origin games. The music is something that I think we're all proud of in the game.

As far as the industry goes now, it's a pretty small team. I actually think that's a big reason why it came out on time

and why it's as tight as it is. The smaller number of people you have working on something, I think the more in common the vision can be and the tighter the software you can produce.

We plan to keep it that way, in fact. One of the things we were looking for when we left Origin was the ability to work in a small environment, where you're working with relatively few people instead of thirty or forty people. The ability to work with a small team lets you be so much more efficient. As far as any of us are concerned, it's the way to go.

BATEMAN: In Ascendancy, no two games are likely to be identical or even close. Explain a little about that.

BLOM: First, there's strictly the numbers. We can do the math—there are twenty-one species in the game. If you were to play a seven-species game, that leads to over half a million combinations of species.

Then there are other factors, such as the atmosphere of the galaxy that you play in. So, you can see right away that there are hundreds of thousands, if not millions, of combinations of scenarios you can play.

Each of the species has what you might call a set of personality numbers. Depending on the field of AI [artificial intelligence] you're talking about, you would call them different things; but they're basically the parameters that affect the personality of the species, which are unique for each one.

BATEMAN: And beyond the personalities of the species, there is an all-important special ability for each species.

BLOM: The idea is to have the universe with a set of rules that governs how things work. Each species has a trump card, its special ability, that it can use to break those rules from time to time. With each of those being different—and they are very different—you'll find that depending on who is present in a game, the game will be different.

In fact, if you play a game and, say, the Hanshaks are in it, that immediately affects your strategy. You go about

things in a little different way, and that's true for a number of species. That's where a lot of the variety comes from. In addition to the sheer number of combinations, these special abilities really do change the face of the game, depending on who is present.

BATEMAN: Because of these various combinations and the special abilities, Ascendancy has a high replay value.

BLOM: As far as good game play is concerned, one of the things we consider important is replayability. We have an internal philosophy of wanting to only do games that are fun for us to play after we have designed and programmed them.

So in an adventure game—which we're considering for our next game; we're not really sure yet—the game can't be a linear path adventure game where there's a specific thing that you do and a set of orders that will cause you to win.

We want to be able to play the game afterwards and still have fun. And we think that if we can do that, then that ensures that a consumer is going to buy the game and play it a number of times.

When you pay \$40 or \$50 for a game, you'd better be able to play it quite a bit and have a good time with it. You [can] buy five CDs for that or go to ten movies. So variety and replay value are important.

We have a joke around here about “punishing” the player. We feel there are a lot of games that inadvertently punish the player with the way the game works. One common way to punish the player is with the user interface.

One of the things we're really trying to do is to get away from any numbers that cause the player to have to mentally keep track—this game has this range and these shields are this powerful. Because if you provide that information with numbers on the screen, the player often will feel: “These numbers are here, so if I don't pay close attention to them, then I know I'm not playing as efficiently as I could.”

But then they also feel, “Well, it's really not fun to try and add up the numbers.” So, as a result, there are portions

of the game that start feeling like homework. Where you're trying to add up these numbers and decide what should I do here and what should I do there.

One of our design goals was to have a game that you could sit down at and casually have fun with without worrying that at any minute you might lose the game or worrying that you're not playing in the most efficient way possible. It's so inherent to human nature to want to explore and discover new things.

BATEMAN: Ascendancy has a very intuitive feel to it, even though there are numerous action screens to maneuver in.

BLOM: I've watched a number of people play the game blindly for the first time, to see how they react as far as being able to get help and how they get into it. What I've found is that I'll show them how to get help and I'll show them the tutorials. And the people I watched didn't even use the tutorial that much. They used it sometimes, and they used Help. But, mainly, they were more interested in getting into the game immediately.

I would say after 35 or 45 minutes, maybe an hour of playing, they're saying "Oh, I get it. I understand how all this works now." Everything has come together for them after playing with it for about an hour. At that point, they realize that they've made some mistakes in the last hour as far as "Well, I shouldn't have built this here" and "I shouldn't have built that there," but what all of them have realized and done is that even though they've made some mistakes, there's no reason for them to start over.

The AI is written so that it's not a real nasty AI in the sense that it calibrates itself to the sense of the player. A first-time player can play for an hour or so, and after an hour figure out how things should be going. From there the player can change course of strategy and be able to finish the first game without having to go back and start over.

I think it's important for a game environment to be forgiving as far as people wanting to learn while they play. I

think most people will appreciate the kind of casual, laid-back approach where they can just say, “Oh, I want to try this out and see what this does,” or “Oh, that looks neat, I wonder what this does,” or “What’ll happen if I do this?”.

For me, I want games to feel as if they’re not just one-shot pieces of software or not even just a game per se—kind of a software toy that’s just fun to play with. I can’t even tell you how many hours we’ve spent here staring at the star [field] spinning in various directions. That kind of thing just makes it a neat toy to play with.

BATEMAN: You’re deliberately vague in the manual about winning conditions in Ascendancy. Tell us a little bit about that.

BLOM: Well, most people would describe this as a strategy game. I’m sure when people attach a genre to it, they will call it that. But really, I think that you could look at it as almost an adventure game with a heavy strategy component, or as a strategy game with a heavy adventure component, depending on how you want to look at it. Exploration and discovery, those are the key elements of this game.

If you watch all the tutorials or if you read the manual carefully, they will tell you how to win—but we almost hope that people won’t so they can just try to figure out on their own how to build their first ship or how to get their first colony. These are the kind of things in an adventure game you have to figure out how to do.

There are, I think, half a dozen winning conditions. And only one of them is “Kill everyone.” It’s almost always easier to get a better score if you try and make alliances with everyone, and there are several other ways to win. We think that these ways will happen to people accidentally when they’re not even trying.

We want people to try all kinds of strategies for winning this way or winning that way. We’ve had people try to win without ever leaving their planet, which, in fact, is possible. They can win the game without ever building a ship. It

requires lots of diplomacy and you are very vulnerable, but it can be done.

BATEMAN: *So part of the built-in allure of Ascendancy is to surprise players with various winning conditions that are not made public?*

BLOM: It helps maintain the fiction of “You are the leader of your species; how are you going to lead these people?” Are you going to make them the mean overlords of the galaxy and go around trying to mop everyone up, or are you going to lead a peace-loving species?

We think the way we’ve planned the game—that peaceful co-existence is encouraged and alliances are a big bonus to your score—a wider audience will find it appealing rather than the small core of war game enthusiasts. They’re into the kind of strategy of building ships and taking them to this and that point. Certainly, that’s fun, too. But my wife, for example, has played the game a fair bit, and she doesn’t really like getting into battles. She likes going around and finding new species and talking to them.

We tried not to put any predisposition on the player as far as encouraging him to go down any particular path; we want to leave him as wide open a space as possible so that he gets the feeling of “My gosh, I’m starting out on this world—look at all these stars! And I can adopt any strategy I want to.”

BATEMAN: *Ascendancy offers a feature to manage automatically research and colony development. Is that more or less productive and fruitful, or is it merely neutral?*

BLOM: It will not follow a predisposed path. It is influenced, certainly, by what the species thinks is important. But there’s a random element in there. There are key topics that are important to get early on—this is true for both planets and research. Once a player becomes good, he will easily be able to out-manage those kind of auto-pilot modes. Those auto-

pilot modes are mainly there in case you just don't want to deal with that. Well, there's your option.

It's another feature we hope will open the game to a wider market, where you get people who are not interested in managing every square on every planet. All they want to do is fly their ship over here and blow up this guy. It's also intended for a section of the galaxy that's fairly secure and you don't want to deal with this planet every time, then you put it on auto-manage while you concentrate on another area.

It's not intended to be put on auto-manage if you want it to be the most efficient. That would have been a bad idea for us because you could learn the most efficient way to manage by watching an auto-managed planet. And we don't want to give that away. Also, it would kind of take the fun away because you would feel, "Well, I'd kind of like to do this myself, but the auto-manage just does a better job, so if I'm playing to win, I should let the auto-manager do it." We didn't want it to feel like that either.

We wanted it to feel like "I'm going to put this planet on hold, but they're going to be making some nice progress doing things to help out the situation in general." Auto-manage is there to reduce the complexity for those people who want to reduce it.

BATEMAN: *How will the Logic Factory approach the creation of future games? And how many new games do you want to produce?*

BLOM: Right now, we'd like to be doing strictly one game at a time. It's hard to say whether we will grow. Right now, we have a pretty strong leaning toward not growing at all. It's kind of our philosophy with hiring people. The standard line is that we don't hire anybody; we're not growing. Period.

And then, the exception is that if someone comes along that we know or have seen their work and they're just very good, then—whether we need them or not at the moment—we'll hire them. Basically with the idea that we just want to

get the most competent people and the people who have their own creative ideas and who don't really need to be managed in any way.

We want to deal with a tight, small production group where we can make as much money as we're interested in making and where we can put out the best quality of games. So there are no plans to grow, although as I said, if someone perfect comes along, we're going to hire them. Other than that, we're not going to hire people just so we can do a bigger game.

BATEMAN: *The twenty-one species are about as varied as a group of aliens can be. How did you come up with them?*

BLOM: It was a lot of fun. We tried a number of different ways to come up with that group of species. We talked casually a lot. Our offices are built over a creek bed that's dry a lot of times. And we can walk to one of Austin's biggest parks in about five minutes. We would just walk in the park and talk about the crazy ideas for species, do sketches, and things like that.

Then when it came down to it, Art, Jason, and I split up into our offices and based on all our discussions, sat down and wrote up descriptions of the aliens. Then we got back together and collated them. The species gradually evolved from there.

We're always amused by a lot of space games where, like *Star Trek*, all the aliens just have prosthetic foreheads. And then there are space games in which you have your cat people and your bird people and your bear people. Kind of very much based on life as we know it here on our world.

But it's actually quite challenging for an artist to come up with unique types of things and try not to model them based on things you find here on Earth. Certainly, there are a few that do resemble Earth-like creatures. But it's difficult to come up with twenty-one who don't. It was our goal to put together a group of species that were alien instead of the typical people with funny-looking faces or five hands.

TEMPLEMAN: For a couple of species, for instance, John Paul or Jason Decker would do a piece of artwork, and we'd say, "Okay, I like the way this looks." So, it would be driven by the piece of art and the species' history would come later. But most of them were created by the combination of me, Art, and Thomas devising different special abilities and devising different species. We were trying to get away from assuming that everything is a biped. In the course of the universe, there's really no reason why everything would evolve on another planet along the same lines.

We were trying really to go for something totally different and interesting, and come up with histories that went along with that, so the fiction would be kind of tantalizing. I would say it was pretty much a group effort once again. We each had ideas and most of the people came up with at least one species.

BATEMAN: Do you have a favorite species?

TEMPLEMAN: I have a few favorites. I really like the Swaparamans. I like their mournfulness, and they're kind of neat.

BATEMAN: What can you tell our readers—without giving too much away—about an overall strategy or an approach to the game.

TEMPLEMAN: I'll try to answer your question on a couple of different levels. I'll start with just the attitude that you play the game with. I think it's more like a combination between a strategy game and an adventure game, because we deliberately left a lot of things up to the player to discover—such as the winning conditions. You know, a couple of the winning conditions are fairly evident—if you wipe everyone out, that's a win, that type of thing.

Another winning condition is capturing all the home worlds. We wanted the player to explore and to find that out. I would recommend that players look at it a little more as having an adventure-game flavor, as opposed to having

everything spelled out so that you can look in your table of numbers and compute exactly the right structure to build at a given time. It wasn't intended for that sort of really micro-micro-management.

As far as strategies go, I like using the empire display myself. I like that feeling, like in *Risk*. In *Risk*, Australia's kind of neat because it provides two armies a turn, and there's one entry point, so you only have to defend one spot. You can either sit there in Siam or Indonesia, I think, and block that off and defend from one point.

Similarly, with the empire display, that's pretty much the way I play *Ascendancy*. I watch that, and I guard the points that are the only entryways into my region of space. I try to expand them in ways that make sense.

In other words, if I'm expanding along one arm and I reach a [star lane] node where there are many, many entry points, I would rather stop at a bottleneck and hold my empire at that size for a little while. So, I go through cycles of growth and maintenance where I've acquired a number of planets, I'm allowed to have more ships, I can output more research, and so on. And my empire, while I'm going through the growth phase, is fairly stable because the number of entry points is very few. And I watch that empire map a lot.

BLOM: I want to leave you with this last thought.

You were asking earlier about where this game comes from. One of the things I remember as being neat about this project is how much Jason and I—when it was just the two of us—enjoyed working together, in particular, programming at five o'clock in the morning. We'd just go outside and take a break and stare at the night sky. I don't know if anyone else will get the sense of this when they look at those stars there spinning, but we both think that there is something very compelling about that.

I'm sure everyone has at one time or another sat outside and stared in awe at the night sky, when you sit back and think about how many stars there are out there. How incred-

ibly vast it is and what the chances are that there's life on other worlds.

It's neat when you work on a project—it's your job, a fictional game and all this—but it affects your life. I found myself going outside at night and staring at the stars a lot during the development of this game. I don't know if that can translate in any way to the player, but you know, if it makes a few players get up and go outside and look up at the stars or if it makes them get out a star map and try to learn something, then that's just great. And I think it will.



APPENDIX A

PLANETARY ITEMS

Agriplot — A high-productivity farming area. Agriplots increase a colony's prosperity, which in turn favors population growth.

Alien Hospitality — An overall planetary project. A colony that dedicates its industry to alien hospitality is likely to improve diplomatic relations with alien species.

Artificial Hydroponifer — A super-efficient nourishment production facility. Its prosperity output is greater than that of an agriplot.

Automation — A process by which the personnel maintaining a structure is replaced by robotic equipment. Once a structure has been fully automated, its former staff can be employed elsewhere on the colony.

Cloning Plant — This plant organically duplicates new members of a planet's population. There is no need for more than one cloning plant per planet.

Endless Party — An overall planetary project that, when implemented, increases a colony's prosperity proportionally to its industrial output.

Engineering Retreat — An academic production and research plant where qualified engineers work on improving a colony's logistics and production methods.

Factory — A common structure on most colonized planets. Factories increase a colony's industry, which in turn speeds up the completion of planetary projects.

Fertilization Plant — Boosts the prosperity of an entire colony by producing vast quantities of agricultural and hydroponics supplies. There is no need for more than one fertilization plant per colony.

Habitat — A high-density living and working complex with a controlled internal climate. Habitats provide a colony with prosperity and allow room for population growth.

Hyperpower Plant — A marvel of high technology. By generating power for all of a colony's manufacturing structures, this plant significantly increases a colony's entire industrial output. There is no need for more than one hyperpower plant per colony.

Industrial Megafacility — A huge, self-reliant production plant. Its industrial output is greater than that of a factory.

Internet — Provides a colony with a high-speed information and data transfer system. It greatly enhances the progress made by a colony's research centers. There is no need to build more than one Internet per colony.

Interstellar Trucking — A myth.

Laboratory — A center for research and development. Laboratories enable a species to make technological discoveries.

Logic Factory — A research complex that not only specializes in the entertainment and happiness of sentient beings, but also provides prosperity.

Long-Range Orbital Whopper — A dauntingly powerful long-range weapon that can be used over and over again. The elite of planetary weaponry.

Lush Growth Bomb — This bomb makes the surface of a planet more habitable by combining chaos technology with organic synthesis equipment. Only one bomb is of noticeable value on any planet.

Metroplex — An urban center with industrial, technological, and residential capacities.

Observation Installation — A device that scans nearby alien ships. There is no need for more than one installation per planet.

Orbital Cloaker — This device uses modified diffraction generators to disguise structures orbiting a colony, rendering them invisible to alien spaceships.

Orbital Docks — Available to any ship orbiting a colony, these docks provide a maintenance platform for the repair and refitting of ships. When a ship is refitted, its contents may be changed and its hull is repaired.

Orbital Megashields — These devices are highly fortified planetary defenses. Much harder to destroy than the lower-tech orbital shields, they prevent alien ships from entering orbit around a colony.

Orbital Missile Base — A potent short-range planetary weapon. Though it may only be used once per game day, it can severely damage nearby ships.

Orbital Shields — A colony's primary defense against alien invasion. As long as a colony is protected by orbital shields, alien ships may not enter orbit.

Outpost — An important structure for colonies on small or minimally habitable planets. It provides living facilities for additional population.

Research Campus — A well-equipped experimentation center that has greater research value than a laboratory.

Scientist Takeover — Not an individual structure but rather an overall planetary project that, when imple-

mented, increases a colony's research progress proportionally to its industrial output.

Ship — Ships are the key to the exploration of space. Depending on the mission, each ship can be designed and equipped for travel, combat, and the colonization of planets.

Shipyards — An enormous orbital center for the production of spaceships. Though expensive to construct, it is a necessary first step toward space exploration. A colony must have a shipyard in order to build ships.

Short-Range Orbital Whopper — A powerful, short-range energy weapon that may be fired three times per day. Woe to the ship that runs out of power while in its range.

Surface Cloaker — This device uses high-frequency diffraction generators to make the surface of a planet practically invisible to alien ships.

Surface Megashield — A powerful defense against alien invasion. This shield uses protective ion fields to augment the endurance of its defense armaments. It is much more valuable than the normal surface shield, but certainly not impenetrable.

Surface Shield — This device houses defense armaments that protect a colony against alien invasion. Several surface shields may be necessary to defend a colony against large invasion forces.

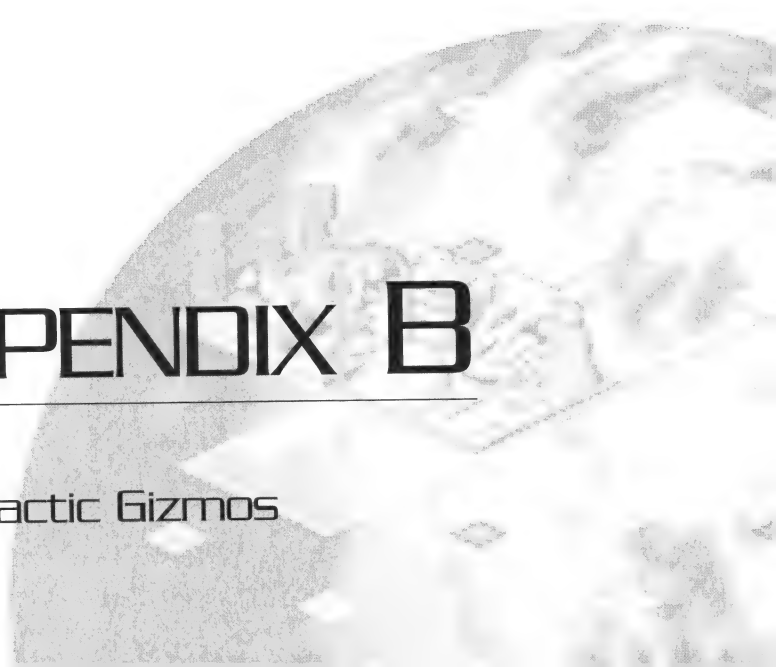
Terraforming — An important project for colonies on minimally habitable planets. When a black surface square is terraformed, it becomes a white square, and the colony may then build structures on it.

Tractor Beam Element — This device generates a powerful stasis field to overcome a ship's drives and pull it toward a planet. You can use a planet's tractor beam in

the system display by selecting the planet and then selecting the tractor beam from its item list.

Transport Tubes — These devices allow colony structures to spread quickly over the surface of a planet. They are easy to produce, require no maintenance, and can even be constructed on black squares.

Xenoarcheological Dig — This dig allows a colony to uncover and analyze the ruins of ancient civilizations. When unearthed, these ruins often provide the key to the discovery of advanced technologies.



APPENDIX B

Intergalactic Gizmos

Accutron — A massive space analysis and targeting system that increases the effective range of a ship's weaponry. It is fairly costly to build, but can provide a strong advantage in battle.

Aural Cloud Constructor — A medium-range scanner that projects an aural cloud through surrounding space. It observes vibrations in the cloud to detect the status of other ships. Although always active, it consumes no power.

Backfiring — Causes all the weapons aboard the target ship to unleash simultaneously their destructive potential—unaimed, uncontrolled, and chaotically. The more weapons the target ship carries, the more it is damaged by its own weapons.

Brunswick Dissipator — When fired at a ship, it temporarily drains the target ship's generators, leaving it powerless. It is costly to construct and power hungry.

Cannibalizer — An emergency device that allows a ship to convert some of the mass of its own hull into an energy reserve. Because this feature is destructive to the ship, it is usually used only in a last ditch effort to survive.

Cloaker — The vibrating crystals of the cloaker produce a broad spectrum of noise and interference that blocks all

sensors from gathering information about the cloaked ship. The device requires no power and is always active once it is added to a ship.

Colonizer — Allows a ship to create a colony on an unoccupied planet. It carries a group of trained settlers and a prefabricated colony base that provides the tools necessary to grow a self-sufficient colony. The colonizer is deployed from orbit and can be used only once.

Concussion Shield — Surrounds a ship with a flexible energy barrier that absorbs kinetic impulses and spreads them over its entire surface. Like most shields, it only consumes power when it is active.

Containment Device — Destroys one colonizer or invasion module, just as the disarmer destroys one weapon. Used to protect planets from an invasion, it is intended to be a peaceful weapon that, like the disarmer, only causes harm to machinery.

Deactotron — A high-tech active defense module. When it detects the approach of particle or energy projectiles, it reacts by ejecting an appropriate countermeasure. Like most shields, it only consumes power when it is active.

Disarmer — Designed as a weapon of peace, it selectively destroys weapons without causing other damage. Utilizing visual pattern recognition and analysis of energy output to identify a weapon on the target ship, it causes that weapon to overload and destroy itself.

Disintegrator — Ejects a cloud of infinitesimal bubbles of alternate reality that cause a chain reaction in the target ship, spreading it atom by atom across infinite alternate time lines. The cloud has no substance and cannot be blocked by normal defenses. The disintegrator can be used only once, is extremely expensive to build, and uses an immense amount of power. It must be used at close range.

Electromagnetic Pulser — This device produces electromagnetic pulses that disrupt delicate technological equipment. It does little structural damage, but it strobes very quickly, producing many pulses in a short time that can overload and destroy the target ship.

Fergnatz Lens — This device passively collects and focuses cosmic energies at its target. It requires no power to operate.

Fleet Disperser — When fired at another ship, its effect is similar to that of the gravity distorter in that it creates a gravitational ripple that repels other ships away from its target. It has an extremely long range.

Fourier Missiles — These missiles use image recognition to identify vulnerable areas of a ship. They require little power to fire, but they reload slowly and don't do much damage.

Gizmogrifier — Like the disarmer, the specialty blaster, and the containment device, the gizmogriper will damage equipment without inflicting any other harm. It performs a general-purpose version of this concept, and it will destroy the first major device it locks onto.

Gravimetric Catapult — This gizmo causes a ship to experience temporarily exaggerated gravitational force. The ship is pulled toward the strongest gravity well in the vicinity—the nearest sun. Whipping past the sun, the ship stops opposite its previous position when it has run out of momentum.

Gravimetric Condensor — Momentarily increases the gravitational field strength of a star, causing all the ships in the system to be pulled toward the star with great force.

Graviton Projector — More powerful than the ion banger, this device sprays a gravity field in front of a ship, pulling it perpetually forward.

Gravity Distorter — Creates a gravitational wave front that emanates from the ship using the device. This causes small objects, such as space vessels, to be pushed away from the ship that used the distorter.

Gyro-Inductor — Allows a ship to generate power when it travels up the gravitational gradient of a planet. When the ship leaves orbit, the gyro-inductor creates power. It uses no power and takes effect automatically.

Hyperfuel — A one-time-only power reserve of great capacity. It is a cheap, disposable source of power.

Hypersphere Driver — Creates unstable bubbles in spacetime that exit into higher dimensions. When these bubbles intersect normal matter they collapse, pinching off the matter inside another dimension. This long-range weapon gobbles power and is extremely expensive to produce, but can inflict massive damage.

Hyperswapper — Creates a standing hyperwave field between a ship and its target, producing a massive space disturbance that causes them to swap positions. It operates at an extremely long range, uses little power, and is cheap to produce.

Hyperwave Nullifier — Surrounds a ship with a space-distorting hyperwave field. The field causes incoming projectiles to slide around the hull of their target and miss it completely. Like most shields, the hyperwave nullifier only consumes power when it is active.

Hyperwave Tympanum — A long-range scanner that is able to detect the minutest variations in the hyperwave ether and analyze them to obtain status information about other ships. It is always active and consumes no power.

Inertia Negator — Generates an anti-mass field that allows a ship to float lightly through space. It is about as strong as the graviton projector, but it consumes much less power.

Intellect Scrambler — When fired at a ship, this weapon can turn an experienced crew into a group of bumbling rookies, partially wiping the minds of that ship's crew and eradicating their skills and memory of the recent past.

Invasion Module — Transports a planetary infiltration team and their camouflaged base of operations to a planet's surface from orbit. It can be destroyed by a planetary surface shield unless multiple invasion modules are launched to overload the surface shield's tracking ability. It is expensive to assemble and can be used only once.

Invulnerabilizer — Sets up a temporary high-magitechology shield around the ship using it. While it lasts, the shield will not allow the ship to come to harm. It consumes little power, but it is costly to build and can be used only once.

Ion Banger — Sucks in ions from surrounding space and smashes them into each other at high speeds, creating a propulsive force. This device is significantly more powerful than the Tonklin motor.

Ion Wrap — A low-grade particle defense shield. Like most shields, it only consumes power when it is active.

Lane Blocker — When fired into a star lane opening where it sits, it elevates the inherent gravitational turbulence of the opening to the point where star lane drives and star lane hyperdrives can no longer overcome it.

Lane Destabilizer — When fired at a star lane or red link opening, this device induces gravity waves at the resonant frequency of the star lane. This causes the ships inside the star lane to be thrown quickly toward their destination point. The lane destabilizer itself is destroyed in the process.

Lane Magnetron — Frees the ship using it from the gravitational turbulence-induced drag normally encountered

in star lane space, allowing the ship to slip through the star lane almost instantly. The lane magnetron uses fully as much power as a nanotwirler produces and can be used only once.

Lane Oscope — Allows astronomical instruments to penetrate star lane space and scan the system at the other end of a star lane or red-link opening. It consumes a lot of energy.

Mass Barrage Gun — Launches a spray of projectiles from its electromagnetic accelerators. It is cheap to build and uses little power—the projectiles are low-tech spheres of solid metal that rely on kinetic energy to do damage. It is easy to deflect, slow to reload, and has a short range.

Mass Condensor — Operates as the gravitational distorter, except that it is targeted at a ship. All ships will be attracted toward the affected ship. It works at a long range and consumes a lot of energy.

Molecular Disassociator — Generates a cloud that weakens the molecular bonds in matter. This tends to corrode the target rapidly. Its main drawback is that it takes a long time to form a fully charged cloud.

Molecular Tie Down — When fired at a ship, this device temporarily immobilizes the ship by damping the reactions powering its engines. This affects all known normal engines—even the powerful nanowave space ber.

Moving Part Exploiter — Through a combination of ultrasonic vibration, spacetime micro-distortion, and luck destabilization magitechnology, the moving part exploiter causes devices to break down explosively. The more intricate and advanced the equipment on the target ship, the more internal damage it suffers from equipment malfunction. This device is costly to build and consumes a lot of power.

Murgatroyd's Knower — A long-range scanner that uses a combination of advanced technologies to determine the status of other ships. It is always active and consumes no power.

Myrmidonic Carbonizer — Fires a burst of energy that grows in strength before dissipating. There is an ideal range for the carbonizer, at which it is the most powerful weapon known. It is a complex and expensive piece of machinery.

Nanomanipulator — Fires bursts of highly focused nanoenergon flux. The flux induces a chaotic nanowave upon impact that rips through the target, jumbling alternate realities together. It is hugely destructive, fires in quick bursts, and uses a lot of power.

Nanoshell — Simply creates a dense barrier of nanoenergons around a ship. Few weapons are able to penetrate it. Like most shields, it only consumes power when it is active.

Nanotwirler — Puts a stream of nanoenergons into sympathetic resonant motion and channels off the energy they release from each other. It generates even more power than the van Creeg hypersplicer.

Nanowave Decoupling Net — Harvests coupled nanowaves from surrounding space and analyzes them to learn the status of other ships. Its range is practically unlimited. It is always active and consumes no power.

Nanowave Space Ber — Projects a wide-band field of nanoenergy that warps the space around a ship, allowing it to slide rapidly in any direction. It is a very powerful engine.

Phase Bomb — When launched at a planet, this bomb destroys all structures on the planet's surface. It can be used only once and must be launched at short range.

Plasma Coupler — Allows a ship to beam some of its power to another ship across a long distance.

Plasmatron — Fires extremely long-range bolts of superheated plasma. It takes a long time to recharge.

Positron Bouncer — The accelerators inside the positron bouncer produce a high-momentum blob of particles. When fired at a ship, the particles impart their momentum to the ship, buffeting it away without damaging it. The positron bouncer consumes little power and is cheap to build.

Proton Shaver — A power generator that operates by extracting small quantities of protons from heavy atomic nuclei and converting them to energy. It is inexpensive but produces little power.

Quantum Singularity Launcher — Generates and fires tiny black holes—infinately small but incredibly massive objects that easily punch through an ion wrap field. The disadvantages of this weapon are its short range and long recharge time.

Quark Express — Uses a little-understood technology to squeeze energy from various sub-subatomic particles. It is a powerful generator.

Recaller — Creates an unstable shunt through star lane space to a ship's home system. The ship using the recaller moves instantly into the shunt and arrives immediately at its home system.

Remote Repair Facility — Allows a ship to repair damage without having to enter orbital docks. It consists of automated systems spreading throughout the ship, engineered so finely that the repair process resembles organic healing. It uses a lot of power when activated, and adding it to a ship is an expensive project. It is a magitechnological device that allows a ship to repair damage to another ship by absorbing that damage itself. It should be used with caution—some inattentive cap-

tains have managed to scuttle their own flagships with it!

Replenisher — Fully recharges all of the weapons aboard a ship. Its installation is involved and expensive, but it can be a life saver in an intense battle.

Self Destructotron — A desperation device. It destroys the ship using it by converting most of the ship's mass to energy, creating a huge explosion that greatly damages other ships nearby.

Shield Blaster — Temporarily shuts down the defensive systems of the target ship, leaving it vulnerable to attack.

Smart Bomb — Uses advanced empathic biosensor technology to determine the relationships between the ship using it and the other ships present in the star system. Once activated, it fires in multiple directions at every ship it has determined to be hostile, causing heavy damage comparable to that of an ueberlaser. One use expends it.

Specialty Blaster — Destroys one specialized device, just as the disarmer destroys one weapon. Like the disarmer, it recognizes a particular type of device and disables it with precision and a minimum of destructive force.

Star Lane Drive — The key to interstellar exploration. This device is activated by the energies emanating from the opening to a star lane and requires no power to operate. It allows the ship to overcome the barrier of gravitational turbulence at the opening and slip into star lane space. The more star lane drives a ship contains, the faster it will slide through star lane space.

Star Lane Hyperdrive — A more powerful version of the star lane drive that improves speed through star lane space. Although regular star lane drives allow slow travel through red links, the hyperdrive makes the use of red links practical. Star lane hyperdrives are much more costly to produce than star lane drives.

Subatomic Scoop — Sucks subatomic particles from surrounding space and converts them to energy. It is a stronger generator than the proton shaver.

Subspace Phase Array — Detects subtle variations in the space flow around a ship. It is able to detect a ship's status information at short to medium range. It is always active and consumes no power.

Tonklin Frequency Analyzer — Scans energy leakages from a ship to determine information about its status. Its range is relatively short. It is always active and consumes no power.

Tonklin Motor — A weak engine based on an elegant quirk of momentum theory. It is inexpensive to construct.

Torroidal Blaster — Gives the ship using it a huge boost in engine performance, but it is hard on the engines and usually damages some of them. It draws all the power it needs from the engines and needs no generator power.

Tractor Beam — Allows a ship to pull another ship toward it. It has a very long range and uses little power.

Ueberlaser — A high-power pulse laser that cuts instantly through an unshielded ship hull. It does heavy damage but uses a lot of power.

Van Creeg Hypersplicer — A powerful generator, it merges mixed-frequency hyperwaves and collects the energy bleed-off.

Wave Scatterer An energy dispersion mechanism that passively diffracts and scatters energy waves as they make contact with a ship's hull. The wave scatterer is a weak defense; but unlike most shields, it consumes no power.

X-Ray Megaglasses—These glasses allow you to view the contents of any ship you are able to scan. Passive and always in effect, they require no power to maintain but are fairly expensive to build. Used in conjunction with powerful scanners, they can be informative.

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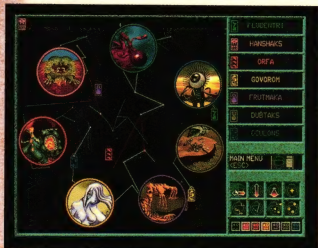
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